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THE MOTION PICTURE CAMERA MAGAZINE



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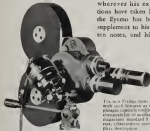
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Vol. 16 February, 1938 No. 2

Contents

Three Hundred Men And Walt Disney . . . 18
By William Stull, A.S.C.

What About Me? . . . 34
By Ben Geo, A.S.C.

How Joe Valentine Built Alpine Conspira-
cies Into Sea Level Shots . . . 32
By George Blaisdell

Public Matches Daylight With Area in
Technicolor Film at Warners . . . 36
By Sol Polla, A.S.C.

Camera Work Fails True Mission When
It Risks Realism for Beauty . . . 38

Over London at Night Elmer Dyer Flies
on Nose of British Bomber . . . 37
By George Handell

Jackson Completes Portable Motion
Picture Laboratory . . . 62



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The Front Cover

TO the young thousands who
have seen "Snow White," the
last word in the work of Walt Dis-
ney, no explanation will be neces-
sary to identify Snow White and
two of the sturdiest friends of hers
among the Seven Dwarfs. The
phantasy is a milestone in the
progress of the screen as well as
in that of the young man who has
made it possible. That he still is
a young man is to the distinct ad-
vantage of the screen and the au-
diens who follow the adventures
of Mickey Mouse and his fellows.
Here's to his good health—and his
family's good health. Yes, that
goes for Walt and for Mickey, too.

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THE AMERICAN SOCIETY OF CINEMATOGRAPHERS was founded in 1918 for the purpose of bringing into closer cooperation all those leaders in cinematography who strive for preeminence in artistic and technical leadership; to further the advancement of the cinema and its allied crafts through unceasing research and experimentation as well as through bringing the artists and the scientists of cinematography into more intimate fellowship. Its membership is composed of the outstanding cinematographers of the world, with Associate and Honorary memberships bestowed upon those who, though not active cinematographers, are engaged none the less in kindred pursuits, and who have by their achievements contributed outstandingly to the progress of cinematography as an art and as a science. To further these lofty aims and fittingly to chronicle the progress of cinematography the society's publication, *The American Cinematographer*, is dedicated.



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Three Hundred Men: and WALT DISNEY

that's the Analysis of One Reporter

There Was a Newsreeler and He Liked to Draw: So
Draw He Did . . . He Made Cartoons: Into Them
He Breathed the Breath of Life . . . He Made
No Mousetrap: No: But He Did Make
Mickey Mouse . . . And the World
Beat a Path to His Door

By WILLIAM STULL, A.S.C.

ONCE upon a time, an old Jakob Graven used to say in telling his tales, there was a newsreel cinematographer. His name was Walter Elias Disney, and he lived in Kansas City, where he filmed news stories for Pathé, Selznick and most of the other almost-day newsreels. In addition to grinding a camera, Cinematographer Disney liked to draw. Eventually he honed his camera and his pencil to perfection, and began to make animated cartoons.

A dozen years later, in Hollywood, this same Walt Disney is still making animated cartoons. Whenever and wherever there are awards or honors offered for outstanding achievement in making animated films, Disney willingly steps up and accepts them as a matter of course. Throughout the lengthening history of the Academy Awards the golden statuette for the best in cartoon films has never been bestowed on any other producer.

The interesting years have changed animated cartoons—and particularly the Disney cartoons—almost beyond recognition, but they have not touched Walt Disney. He is still the same, funny, informal fellow who used to grind out news films for Pathé, and between times sketched amusing caricatures of the office men.

Unique Studio

Today, however, he is the head of the industry's most unique major studio, a plant where over three hundred men and women labor enthusiastically to transform fantasy into tangible technique that can be viewed on the world's screens. A plant where the most delicate, fairytale fantasy is joined to the intricate, slide-rule mathematics of cinematic engineering. A plant where,

above all, each of the three hundred workers functions like an extension of Walt's hands and mind.

For despite this huge force, the Disney Studio is essentially a one-man organization. Every detail passes in some fashion through his hands, and every decision, no matter how small, receives his personal attention.

Not that there is anything stuffily formal about it. It is a simple and natural tribute to the man whose genius is inevitably the aspiration of everything done by his co-workers.

As one of them expressed it, "There isn't a single operation in the plant

at which, in a pinch, Walt couldn't step in and carry on acceptably himself. Perhaps, in some of the more intricately technical ones, he couldn't do as perfect a job as the men who are now doing it, but understand this, he could still do it—and do it better than average men."

Disney's intimate contact with every detail of his studio's work may partly explain why none of his hundreds of employees would dream of ever addressing him or referring to him by the formal title of "Hisie." For a Disney worker to call his chief anything but Walt would be as inconceivable as an ordinary studio employee addressing his boss as Darryl or Louis.

No Time Clock Here

In passing, it may be mentioned that there is no such thing as a time clock in the Disney studio. If Walt has his way there will never be one, for he and his associates work not for pay checks or profits, but because they believe in what they are doing and because they love it.

And let it be recorded here and now that making a Disney cartoon—whether it be done of the sort "Mickey Mouse" and "Silly Symphonies" needs which emerge at two or three week intervals, or a feature like "Snow White and the Seven Dwarfs"—is work, often in the most laborious sense of the word.

Most of us, when we think of all of how animated cartoons are made, think of it in relatively simple terms: backgrounds sketched on paper, animated action on cellobards, with the several drawings superimposed and photographed, a frame at a time. With the animating "cells" changed between each frame or two. A tedious operation, perhaps, drawing and photographing the



Specialized Technicolor lighting set-up photographing a scene for "Snow White and the Seven Dwarfs"
Photos by Lee Fierman

several thousand frames that constitute a one-reel short, but essentially simple.

That is still the basic principle of operations in Disney's "mouse factory," but in advancing the animated film to its present state of technical and artistic refinement, Disney and his staff have added so unbelievably to these fundamentals that they are burned in an incredible profusion of technicalities.

The starting point of any picture is of course the story. In the case of "Snow White" it was of course Jakob Grimm's century-old fairy tale, in the two features currently in production, "Pinocchio" and "Bambi" equally familiar books furnished the inspiration. In the short subjects, the story originates from an idea.

Start With Just Ideas

Perhaps it is an idea from Walt's fertile brain or from one of his story staff, perhaps it is simply a suggestion made by someone in or about the studio.

Whatever it is, Walt and his story drawing "writers" confer over it, tearing it apart, building it up, adding, deleting, changing and revising until the story outline, supported by sketches of key scenes and characters, stands complete, perfectly adapted alike to the cartoon medium and to Disney's unique interpretation of it.

The story is then turned over to a corps of unit animators. Each of these drafts the drawing of certain definite sequences. Each may draw the key drawings—the beginnings and ends of movements, and such basic features—while other animators complete the innumerable "in-between" drawings necessary. Still other artists draw backgrounds exclusively.

While this is being done, the music, songs, dialogue and sound effects are written and recorded. This is necessary due to the essentially rhythmic nature of all Disney films, and, especially in the features, to the necessity for accurately synchronizing the pictured lip-movements with the recorded words.

When the sound is recorded the sound experts "read" the track, and can break down the words, rhythmic beats and so on into terms of film footage and frames. Thus they can tell the animators to draw Snow White or one of the dwarfs speaking a given word at a definite frame in the scene.

Animation Smooth

This gives the animator the key to the situation, for at such a frame the camera will be photographing a definitely numbered drawing. Thus, when the picture is photographed, it is already synchronized with the pre-recorded sound, no matter how long before that sound was recorded. Some of the songs and dialogue for "Snow White and the Seven Dwarfs" actually were recorded nearly three years before the accompanying drawings were photographed.

Everyone who has seen "Snow White" has commented upon the incredible smooth, lifelike quality of the animation. Part of this, as Walt and his cohorts freely admit, was achieved by

the simple but painful method of trial and error. If a scene as originally made did not seem smoothly satisfactory, Walt with his artists and technicians studied it, analyzed it until they found what was wrong.

Then they made the whole thing over—drawings and all—often only to repeat the process as improvements showed room for further advances. This painstaking care was one of the factors which ran the costs on this production up from an estimated \$250,000 to a rumored million dollars, but, as the Disneyers repeatedly state, cost does not enter into consideration at Disney's until perfect quality is assured.

Another vital factor in the perfection of "Snow White's" animation is the guidance furnished by what Walt calls "live action" living actors, suitably costumed, are photographed going through the desired action. The films of this "live action" then guide the animator in preparing his drawings. Each animator works with a Modeler at his side. In this he can study the live action film both in motion, and frame by frame.

35mm. Camera Enters

It has been rumored that the animated drawings are copied directly from this film, but such is not the case. The live action serves purely as a guide. Actually, it is posted out, if the drawings were copied directly from the "live action" frames, the result, while mathematically accurate, would seem unnatural.

The proportioning of figures, heads,

and so on, oddly enough, must be distorted and exaggerated in the cartoon—even for so natural a character as Snow White—if the result is to appear natural on the screen.

The genesis of this "live action" technique probably had its beginning some six years ago, when Walt purchased a 35mm. camera for some vacation filming. At that time, writing in the American Cinematographer for March, 1928, Walt said:

"When I bought my camera I intended to use it entirely for my own pleasure. But Mickey Mouse interested me almost from the start. Ever since I first drew him he has become more and more real and like a real child, organically demands more and more of my spare time. I had never expected that he would become interested in amateur moviemaking, though."

"But he fooled me, and did. I think it started while I was in St. Louis and visiting the wonderful zoo they have there. Something (it must have been Mickey) whispered into my ear and asked me if I didn't realize how interesting it would be to have some films of the way the different animals and birds walked and flew, and how useful it would be in showing my animators how to draw them for the cartoons."

"I didn't put too much attention to Mickey's urging, for after all, I was on a vacation. But I did remember the camera, and shot a number of rolls of the various birds and beasts, telling myself, however, that I was doing it because they were so interesting to me,



Walt and his assistants work on "Snow White"

But when I got back to the studio, Mickey made me run the film for the animators, who got a number of ideas from there. Now I'm going to make some more films of the same sort, doing them more carefully, and as slow motion, so that we can really analyze the movements."

Slow Motion Feature

So extensively has this idea been developed that over 60 percent of "Snow White and the Seven Dwarfs" was animated with the guide of live action filming. Today, such celebrated motion picture directors as Sidney Franklin, director of "Good Earth," and such notable cinematographers as James Wong Howe, A.S.C., are on the Disney staff, helping to solve the problems of producing the cartooned features.

Another advantage offered by well-directed live action is pointed out by one of the animators, who remarked that the live action film helps the artists to solve the ever-present problems such as what to make an actor's left hand do when his right hand is doing some important business, how to manage hands and feet while dialogue is spoken, or wings beat, and so on.

After all, a painter or illustrator sees live, if not actual, models; why shouldn't the animated cartoon artist take advantage of live action film for modeling his animated drawings?

But even with the advantage of live action models, the animator depends largely on photographic hints of his actual drawings. When he has completed the original animation of a scene, sequence, or even of a single movement, he can send his drawings which, at this point, are simply pencil sketches on white paper, to the test department to be photographed.

Murks Comes In

Here the drawings are photographed with an ordinary black-and-white camera, usually on recording-positive film spliced together from the Sound Department's "NOV" sound track takes. This film is developed in a miniature laboratory in the studio, and a few minutes later the artist can slip the test-negative onto his Moviola and study his animation in motion.

These tests are available in coordinating the work of the many individual artists who animate the scenes comprising a sequence. Consequently, the film is run and rerun, and speeded and replaced with tests of other parts of the action.

Since several frames are often lost with each new splicing, and since each scene has a very definite starting point, the film, as soon as it is developed, is marked with a special punch which punches a decreasing number of two holes in each of the first six or eight frames.

Thus, even when the film has been spliced—and accordingly shortened—half-a-dozen times, anyone can immediately determine how many frames have been deleted.

Another technical development which played a great part in the smooth animation of "Snow White and the Seven Dwarfs" was one which permitted the animators to make their drawings in any size that may be convenient. Actually, in some of the long shots the drawn image of a figure like that of Snow White would be but half an inch or less in height.

Scope for Artists

This would of course be far too small for accurate drawing, even if there was to be no animation. It would be absolutely impossible to secure smooth continuity of the successive drawings of this tiny figure in animated scenes, to say nothing of the responsibility of achieving uniformly smooth animation.



Technical Moviola camera, Moviola in photographing animation, and camera and plotter for animation models and background plates, directly before camera.

But in "Snow White and the Seven Dwarfs" the artists were able to draw these animations in just one they wished, they could make the figure eight, ten inches or a foot high if they desired, affording themselves ample scope for including the minutest detail, and for the smoothest consistency of line and movement.

These large drawings are then photographed, and the negative printed, with the necessary reduction in size, on Eastman "wash-off relief" film, 11 by 14 inches in size. These are then developed and tensioned in the usual manner, but not, as would ordinarily be the case, colored and used for color printing.

Instead, the film, which shows a strong brown cellosin image of the drawing, are fixed out and, exactly like any ordinary inked cellosin, are backed with the requisite colors and then used, like

any ordinary "cell," in photographing the cartoon.

Many of the most important scenes in "Snow White and the Seven Dwarfs" owe their perfection to this technique. Many, too, combined this with live action photography to result in animation which could not have been approached with the older, conventional methods of animation.

Finally, the painted backgrounds and the cellosin animations are photographed. This is a simple statement of what was once a routine operation, but by no means a simple one.

Filters Balanced

The camera used is a special one, which successively exposes three frames, each through the correct color filter to give the three necessary color separation frames for the three-color Technicolor process.

The filters used are mounted in a rotating disk which makes one revolution for each three frames of film exposed, thereby exposing one frame behind the blue filter, one behind the red, and the third behind the green. The filters, of course, are balanced with the proper neutral density treatments to equalize the three exposures for a uniform exposure period.

For straightforward camerawork the backgrounds and cells are photographed in the usual way, with the background held on a flat base and the cells superimposed directly on top of it, and all held in register by accurate registering pins which engage perforations in the cellosins, while a pneumatically operated glass pressure plate holds all flat.

But for special scenes, a special "Multi-plane" camera is used. This is an immense stand which permits arranging the cellosins in as many as five or seven separate planes above the background. It is possible to animate action on cells several inches or a foot above the painted paper background, while other action animates in yet another plane and painted "background pieces" between the animated cells and the camera add further to the dimension of depth.

Essentially the principle is the same as that used for generations in the theater, where a back drop provides a background, and flats and cut-outs farther down stage in the wings suggest depth, while the actors move throughout the stage area.

Movement Is Tamed

The problems of perspective, proportions and timing in these multiple scenes can be incredibly complex. Picture, for instance, a traveling train in which the camera "follows" an animated character walking through a landscape.

In one plane the drawings (on cellosin) of the character would animate, following one scheme of perspective and timing. Behind him, the background would move past, not only in a different physical plane, but timed in an entirely different but necessarily rigidly propor-

(Continued on Page 51)

WHAT ABOUT ME?

By
BEE GEE

ART LLOYD, a Hal Bouch son, sometimes wishes he could turn the crank by hand. The motor drive has no individuality. . . . So, HALPERIN continues to match lighting of actors to the projection screen. And he never misses.

JOHN BEYLE takes my seat as your Board of Governors. I was asking for him while he was in Europe. Everything worked out swell, as my buying gloves fit him perfectly. . . . ARTHUR STRAUER still telling them where to place 'em on Harold Lloyd's "Professor Beware".

RAY MAULEN has two pals—Shirley Temple and his eight men. Bell and Howell camera. It's a closed corporation. Both take turns photographing each other. [You may not believe it, but the picture of Art and Shirley on this page was set for printing in this issue when B G brought in this item—G.B.]

JOHN SMITH enjoying a two week vacation. . . . LEONARD WHITE doing a nice job on the Lewis Stone Judge Brady series at M.G.M. . . .

Again GORDON JENNINGS comes through with some clever trick work this time in "Wall, Fargo." They tell me that THOMAS SPARKS, who photographed the picture, is spending a lot of time out at the Washington Art Galleries studying the lighting of the great masters.

GEORGE TELAND had himself, equipment and gear, over to Twentieth for "Kidnapped." Wise boy, George. Full equipment and a crack crew (including a coliform) to keep the spirit de corporeal enables him to report ready for action.

HARRY DAVIS is still "testing" at Twentieth. Why don't you let Bud Fisher beat you bowling, or maybe n't the green shirt. . . . BEN PALIRO and GEORGE BARNES splitting barrels on "Gold Diggers in Paris" for Warners.

DAN CLARK and FAY MARLEY sharing honors for "In Old Chicago." Dan's other work and performances were the two outstanding successes in the picture.

KARL FREUND's latest release, "Man-Proof," checked up a \$40 over the B.O. window when it opened in

Hollywood. Nick gave you a swell print, Karl, and did you know that your director was once a very fine cinematographer?

JOHN ALLEN, the Spanish Versometer, has read everything ever written on Photography. . . . ART KAMMER and CHARLES ROSSER trying to kill time while the scenes fall as moving-picturing. . . . At the last board meeting FRED JACKMAN woke up just in time to vote, or maybe he was thinking out a special effect problem. . . .

WILLIAM O'CONNELL is as proud of the Warner-Fred Gage Laboratory as if he personally designed it, and speaking of laboratories some day they all will be good. . . . GEORGE ROSSER is watching the print on his new picture, "You're a Sweetheart" for Universal.

BEN PLANKIN, ART MILLER and DAN CLARK, filed in the proper place with ink for another year at Twentieth.

JOHN ANZOLA tells me that the equipment replacement reached Ben Wagon and that they are shooting. John expects the first shipment of film soon.

GLENN MACWILLIAMS, whose present address is Queen of the Angels Hospital, is sending out a call for his friends to come in and visit him. . . .

GLENN is off his feet just now with a broken back, the result of an automobile accident. That should be a command. Let's make it so. . . . CHARLES CLARKE trying to explain the difference between the color resolving powers of the eight and sixteen mm films.

HUGH McCLEUNG over at U A tells me that the Lab got an order for 300 prints over the quota on "Hurry-

*Inscribed to the
COMINGS
and
GOINGS
of the
A.S.C. Clan
at work and
at play.*

care." Are they buying that picture? Well. . . . STANLEY CURRIE waving goodbye to a dear friend at the B.F. station.

Pictures—Pictures—Pictures! That's the cry, excitement, and appeal was editor is yelling. So send them in, Men. Buy your stillman a box of cigars or an automobile and tell him to make them candid. Tell him to sneak up on you and explode several flashes to be sure the exposure is natural. Then leave a sigh and remind yourself it's for George. . . . and tie in the stillman's name with it.

(Continued on Page 42)



Shirley Temple tries to bow as left. Hiding ART, who has a long time has been directing photography on the film, who's picture. The cameraman is an authority on the sub-standard camera as well as on the big boys, and says that Shirley has her own Films Double & the title of "Director of photography" may be changed to read "porepore" or.

How Joe Valentine Built Alpine Crispness Into Sea Level Shots

Just Matter of Balancing Incandescents and Arcs
Having Regard to Color of Respective Lights
and Color Sensitivity of Film Employed—
Uses Are Designed for Technicolor

By GEORGE BLAISDELL

WHEN Joe Valentine, A.S.C., made preparations to direct the photography on Universal's "Mad About Music," the subject in which that charming slip of a girl Deanna Darrin was to be featured with Herbert Marshall, he knew he was on his way to something that would be anything other than a picnic.

He knew, for instance, the atmosphere, the locale, was to be of and among the Swiss Alps. Now it just happened he knew quite a lot at first hand about that Alpine atmosphere. For it was not so long since during the execution of an assignment from the Fox studio he toured Europe for a year making locations and studying not only factors in photography, the advantages and disadvantages that were to be found in a half-dozen countries in a various way, but the people and their customs.

In the course of that long post he

had visited Switzerland, went up into the Alps, and in that perfect atmosphere as he had in other places exposed not only numberless still plates—in which work incidentally he is a past master—and the three film for which primarily he went abroad but hundreds of feet of 16mm film, the negatives of which he still has.

Photographic Difficulties

Valentine knew that in Switzerland the air was unusually and sharply crisp, the absolute opposite of that which ordinarily was to be found in Southern California at sea level. It just happened practically every production factor dictated the making of the major part of "Mad About Music" within studio walls at Universal City.

That meant it was necessary to create an authentic simulation of Swiss atmosphere.

Never then that, as a gigantic scene

setting was to be erected and extended practically the circumference of the large stage, it meant the director of photography was to be faced with other difficulties. One stood right out in the script—that sequence in which Herbert Marshall was to pass along the side of a building the wall of which was to be but three feet away from the backing.

Plainly the looking when it was translated to the screen must bear not only the illusion of the Swiss atmosphere, crisp and carefree in its definition, but also it must bear the stamp of distance such as only mountains under snow can convey.

Many "Bugs"

Into the solution of that major problem came first the resolving of many minor "bugs" but nevertheless each one vital in its relation to the whole. Each one, in other words, was like a link in a chain.

The negative being exposed was Eastman Super X panchromatic, sensitive like other film of its type to red, blue and green.

The arc gives a blue-white light, while the incandescent gives a light which tends more to the longer wavelength.

Arc lights are generally employed in such instances as window illumination or for a markedly defined shadow. The effect of toning, again speaking generally, is to give a soft quality to the general result, as an example being ideal for close-ups.

Altitude and Sea Level

Valentine believed there will be no quarrel with the suggestion that sharpness in photography is lack of diffusion. From that viewpoint he drew the conclusion that alpine photography gives the illusion of altitude and diffusion that of sea level.

So the use of the arc to bring out the atmosphere crispness was indicated. What preparation of arc to incandescent, where to place each with relation to the subject and to the whole so as best to develop the desired color balance and the desired simulation of the Swiss mountain atmosphere was the problem faced by Valentine.



Joe Valentine, A.S.C., by the side of the camera with which he does things.

(Continued on Page 52)

Behind the scenes during the shooting of Samuel Goldwyn's new \$2,000,000 Technicolor spectacle,

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*Polito Matches Daylight with Arcs
in Technicolor Film at Warners*

By SOL POLITO, A.S.C.

SO much has already been written about Technicolor cinematography that I must admit I hesitate to say anything about my experience in photographing color film. It is all very well for reporters and press agents to make something unusual and mysterious out of color filming, but every cinematographer who has had any experience with color has speedily learned that good photography in color does not differ very much from good photography in black-and-white.

Such, at least, was my experience when Warner Brothers assigned me to direct the photography of its Technicolor feature, "Gold Is Where You Find It."

Naturally, there are certain purely technical differences between black-and-white and Technicolor, but that is to be expected. After all, they are not too much greater than you would find in changing from one type of black-and-white film to another with which you were not familiar, or in going from one monochrome laboratory to another.

For instance, since color cameras divide the light to expose three film rather than one, and pass it through a number of filters and prisms which are not found in a monochrome camera, it stands to reason that you will have to use a lot more light. But what of that? You would encounter the same problem

often enough in going from one studio's laboratory to another.

Learning Labs

I began by adding perhaps 50 per cent more light. Then, as I became more accustomed to using the program, I found myself sitting down on my lighting with every day's work, until at the end it was very close indeed to my regular black-and-white lighting level.

Besides, this whole question of adding light for color can be interpreted in many different ways. If you take it as a matter of electrical current consumption—generator load—you will arrive at our figure to express the increase; if you count it as a matter of illumination on the set—actual foot candles—you will reach quite a different figure. Both are in themselves correct—but neither is wholly accurate.

Less Latitude in Calos

You also will find that there is somewhat less latitude in color than in black-and-white. This is of course true of any color process, but it must be said that the men in the Technicolor laboratories are constantly making improvements in their process that are improving this. After all, there have been black-and-white emulsions which have had no greater latitude.

I think it has been brought out in these pages that there are two very distinct schools of thought as to how Technicolor scenes should be lit. One of them, supported by some excellent pictures, holds that color scenes should be lit rather more brilliantly than if one was lighting the same scene for black and white.

The other, supported by squall good films, holds that color should be in rather more faith, since one has color contrasts to give the separation contrasted lighting seeks.

No Particular Problem

For myself, I must say that I hold to the latter principle. Much of the contrast in our modern black-and-white lighting was developed simply to get around the limited color rendition of black-and-white emulsions, to separate objects which, while actually of different colors, were rendered too similarly in shades of gray. When you can reproduce these color contrasts themselves on the screen, why add the new unnecessary contrasts in lighting?

Bearing this in mind, lighting a Technician scene is no particular problem.

(Continued on Page 81)



Working for the Technicolor camera during "Gold Diggers of 1933" and "The Sign of the Cross" found side-act footlights and H.L. are specialties. It is for these reasons, while cinematographer Puder noted in "Kismet" lights suitable to reproduce

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Camera Work Fails True Mission When It Sinks Realism for Beauty

So Declares Ernst Lubitsch in Plea for Portrayal
of Life as It Is Rather Than as It May Be
Beautified—Admits Directors Prize
Confreres' Bouquets Highest

By WILLIAM STULL, A.S.C.

THERE is no doubt of the fact that American cinematography is the most perfect in the motion picture world. But there can be excesses. Director Ernst Lubitsch recently pointed out in discussing cinematographers and cinematography with this writer, when it can be too perfect for its own good.

This is a broad statement, but Director Lubitsch's international experience gives him a uniquely broad outlook on things cinematic. Scoring his initial success with UFA in the years immediately following the war, Lubitsch came to America fifteen years ago to become one of the rarely few directors of foreign fare to add to his cinematic stature with such successful Hollywood production.

And fifteen years ago, in an interview with a former editor of this journal, he said, when asked why he had not brought his German cameramen with him to America, that there was no need, that the world's greatest masters of the camera had either grown up with Hollywood or had been attracted there long ago.

Fifteen years of making pictures in Hollywood studios have not changed this opinion. "American cinematographers," he began, "are the greatest in the world. There is no getting around that. Any foreign cinematographer who could compare with these would unquestionably be in Hollywood now, if he were that good."

Examples of Realism

"But it seems to me that sometimes in maintaining that standard of technical perfection which has brought them world leadership, our Hollywood cinematographers actually do themselves—and their productions—harm."

"I will admit I am speaking fresh from having seen two really exceptional French productions within a relatively short time. One of these was 'Le Grande Illusion', the other 'Pepe le Moko'. The latter we viewed at a meeting of the Screen Directors' Guild, and had the privilege of entertaining as our guest its director, Julien Duvivier."

"The action of the film was laid in Morocco, and the scenes were so remarkably realistic, that I immediately

visualized a long and painstaking location trip to northern Africa. Afterward I congratulated the director at the excellence of these scenes, and was amazed when he replied that only a very few extreme long shots had been made in Morocco; that nearly all of the shots I praised had been made right in his studio in France!

"It was the same with the other film, which was laid in a German prison camp during the war. I have seen such things in reality—and was amazed that such a perfectly realistic representation of such scenes could possibly have been created in a studio in another land."

"In both cases, the effect on the screen was precisely as though the cameramen had been able to set up his camera and shoot the real thing, technically limited by just the same limitations in time, lighting and so on

which would restrict him had he been working actually in Morocco or in a wartime prison camp."

"Now, in the average American film—even a Class B program picture—we could create equally authentic sets. But our camerawork would almost inevitably tend to idealize them."

Real Broadway

Lubitsch then pointed to a concrete example. Most picture people, he pointed out, are familiar with New York's Broadway. Some of them know it very well indeed. But if a film is to represent Broadway it does so with scenes of such technical perfection that the perfection itself conceals the real Broadway, that director, cinematographer and all know.

"The result," he said, "is as if some great still photographer like Steichen or Nicholas Murny set up his camera on a rare Sunday morning—after waiting weeks or months for the perfect circumstances—and snapped his shutter."

"The result would be a picture worthy of being hung and admired in salons the world over—but it would not be a literal representation of the real Broadway. It would be idealized. Perhaps it would be the camera angle; perhaps it would be the lighting, or the action. But it would be an ideal conception rather than reality."

"That," he continued, "is what happens all too often in many American films, no matter what the subject is. The result may be technical perfection if itself—but it is too perfect to be the real thing."

The reason? There are many, Lubitsch feels. A contributing factor is undoubtedly the star system which for so many years has had down an iron-clad tradition that the star, no matter what role she may be playing, or what the dramatic circumstances, must appear perfect in herself.

Gilding the Lily

It is only natural that when a cameraman must invariably see it, it that the "set"—the central element of every shot—must be photographed perfectly, he will engage considerable pains to make

(Continued on Page 37)



Ernst Lubitsch, Paramount director, who says the world through cinematography offers three national eyes. Always he is being acknowledged as a worthy on screen and motion pictureman, with a rare flair for subtlety and sophistication for the scene as opposed to the average. Along these its art is still, few have he made it himself contribution in the American screen—and also in directing the American view.

Over London at Night Elmer Dyer Flies on Nose of British Bomber

WHAT rare delicate gesture of friendship and good will possibly could have been conceived by a foreigner, an American flying cinematographer working in his first picture in England, than just casually to permit it to become known to his British confederates that when working over London in the making of a stylized fog sequence in order to get the proper density he was compelled, nay compelled, to resort to the use of a filter designed to enhance the depth of the smog?

It was many years ago that some one, very likely a son of that "right little, tight little" tale, suggested American censors were confederates of what he was pleased to term "short sleeve diplomacy."

But that soft suggestion cannot be laid at the door of Elmer Dyer, A.S.C., flying cinematographer for M.G.M., who returned from England with Mrs. Dyer the day before Christmas Day, 1937.

But on the subject of these Royal Air Force men the returned American was enthusiastic. He knows not how they do what they do in the way of blind flying, solely through the aid of their instrument board, but which certainly does boast a raft of gadgets through the aid of which they do land safely on the ground.

But to get back to the beginning: Elmer Dyer was in Lexington, Ky., last May working on the picture titled "Secrets," which will be known in motion picture history as marking the farewell of Jean Harlow, when he was called long distance from the M.G.M. studio.

Quick Departure

John Arnold, A.S.C., head of the camera department on that lot, informed him he had been assigned to do an air picture in the new M.G.M.-RKO company in England and that he was starting pronto on a trip that might take him eight or even ten weeks. There was a hurried journey home and a quick departure.

Dyer was the first technician to be sent across the water by the home company to do work for the newly organized British subsidiary. The picture to which he was assigned was "Shadow of the Wing" in it there was to be abundant opportunity for the flyer-photographer to capitalize the wide experience he had had in air work.

The A.S.C. man reports when he first arrived in England he found a wonderful sun and good photographic light, but the season is very short for photographic purposes. An amazing how long the days are it often happened sunset shots could be made as late as 10 o'clock.

By GEORGE BLAISDELL

Before he left England, however, the day closed at 4 o'clock or earlier, and in December the lights were on by 3 o'clock and the fog had begun to settle.

The absence of the sun at many times constituted a severe handicap, as it required many tests. When the sun did come through, however, it was beautifully clear, there being a peach light that gave excellent definition.

"I have nowhere seen any more beautiful clouds in this country than the examples I found in England of the existing variety," declared Dyer. "They are of great size and make a magnificent spectacle. When flying in the top of them into clear sky I found a deep azure blue that required very little correction and a subject that particularly lent itself to photography."

"A majority of times conditions were against us. We lost many hours in

(Continued on Page 67)



View of the bomber with Elmer Dyer in the suspended position, gun cockpit at the peak of the ship. At the right and just past the bay for the bombs is the base wing in the independent housing housing the Alky cameras, King Nocturne

Three Hundred Men: AND Walt Disney

(Continued from Page 17)

tered degree of movement between exposures.

In the foreground might be one, two or three sets of celluloid, perhaps animated, perhaps merely moving past, but juxtaposed and timed still differently.

The range of adjustments permitted by this intricate photographic set-up is incredible. Each of the stages is adjustable up and down along the camera's optical axis, and may as well be moving in any direction laterally—north or south, east or west, as the Disney engineers phrase it.

The camera itself is susceptible to all of these adjustments, and may be rotated through a full 360 degree circle about the lens' axis, as well. In all, camera, backgrounds, foregrounds and animated scenes are capable of no less than 86 separate and distinct adjustments for every frame exposed.

Two engineering graduates of the California Institute of Technology are kept constantly busy figuring out the mathematics involved in drawing and photographing these multiple scenes. Thanks to these efforts the problems of aerial photography are minimized.

The whole operation is charted as a special work sheet in which each horizontal column represents one frame and each vertical column the required setting of one possible movement of camera or celluloid. So many of the latter are required that each work sheet is more than three feet wide!

Two Crews

In operation one crew takes exclusive care of the camera's adjustments and a separate crew is responsible for each of the various stages or planes being used for cells and backgrounds.

As each crew completes the adjustments required for a given frame of film, a barman is pressed. This extinguishes the working lights on that plane, and signals on the master panel of the crew chief that that stage is ready. When all have reported ready, the chief presses the button which exposes the three original frames which make one frame of technicolor picture.

Until this exposure is made, or until a special emergency release available only to the crew chief is pressed, none

of the stages can turn on its working lights or alter the adjustment of their apparatus. As the exposure is made, a guide-rail on the work sheet automatically drops down to the next horizontal column and things are ready ready for exposing the next frame of film.

Ordinarily, when an unattended camera wishes to show a room or a trucking shot it would seem easiest merely to animate it in the drawings. But with Disney's multiple camera, and with the Disney insistence upon perfection in animation, perspective and the like, Walt's crews make real tracking shots. By means of the carefully calibrated adjustments of the camera stand the camera can be rolled into or out of a frame "hot" as easily as one would slide into a real car.

Another little complexity, explains Disney's chief technical engineer, William Garity, a Disney veteran of nearly a decade's service, is the fact that in many scenes, to secure not only special effects, but such relative compasses as open shadows and the like, double and triple exposures are resorted to.

Believer in Research

Sometimes special opaque mattes are used; at other times, the cells animating characters may be exposed once in the usual way, in front of the painted background, and then a second time against a flat black ground. The result is, as was seen in "Snow White and the Seven Dwarfs," photographic quality that could not be obtained in any other way.

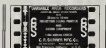
With such technical achievements as this to his studio's credit and paying tangible dividends in the advances shown in "Snow White," Walt is a firm believer in technical research. For some years a special section of the studio has been set aside as a practical proving ground for every idea or brainstorm occurring in Disney technicians.

Soon it came the multiple camera and the use of the wash off relief tape. It is now being reinforced by a formerly unexplored research staff, permanently devoted to driving into the possibilities of photographic and sound technique.

But the most amazing thing about the whole Disney enterprise is not the artistic technique, nor the way it is put on now and delightful artistic use. It is, instead, Walt Disney's personal attitude toward his epoch-making expenses

into the feature producing field. Many successful producers of short subjects have approached the transition from shorts to features dubiously, or with ill-starred confidence. Walt, the industry's most outstanding producer of short-length films, approached this inevitable step almost timidly.

He knew short-subject timing and ac-



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tion, but he admitted his ignorance of feature methods. He knew how to tell a story in eight minutes of screen time, but how would his cartoon technique adapt itself to telling his tales in ninety minutes or more? Yet the transition had to be made, it was inevitable.

Shorts to Features

So he assembled around him specialists of acknowledged skill in the making of regular feature-films, and with their aid launched upon the venture of financing "Snow White." Amazingly, he announced long ago that if the feature did not come up to his expectations of what could be done with the new medium, he would not release it, but would shelve

it, charging off its six-figure cost to expense.

"Snow White" has been released, and is playing to phenomenal success everywhere. The former successful cinematographer is the industry's latest feature producer. And when the last returns come in, years from now, who knows but he may be credited also as the greatest, for his films are spoken of in their appeal, even as "Snow White" itself is aped.

Disney's features, like the age-old tales from which they spring, will, unlike much contemporary production, be as appealing to audiences of all ages, races and creeds a hundred years from now as they are today.

Camera Work Fails True Mission When It Sinks Realism for Beauty

(Continued from Page 56)

that every element of his shot is treated with equal perfection.

"Understand," continued Lubitch, "I do not say that it is wrong to glorify a beautiful woman. Of course not. If she is beautiful and intended to seem beautiful in her characterization, by all means let us show her as the screen as beautiful.

"But it doesn't seem necessary always to take such scrupulous pains to see that every square inch within the camera's range is lit and photographed with such meticulous technical perfection. You know is a still photographer's paroxysm sometimes we have the negative retouched to such an extent that we wipe out all the character of a face! Well, by overemphasizing the game we take with lighting, diffusion and composition it is possible we may sometimes get the same effect in our movies."

Some of it, too, may be due to the overabundance of physical resources at the command of Hollywood's camera men. As the dynamic little man behind the big cigar puts it, "It might just possibly be that the French cameramen who photographed the films I saw were better than American cinematographers, but I doubt it.

Each Camera Is Its Own

"It certainly cannot be that these Frenchmen had more or better equipment than we have here. In all prob-

ability they had less equipment—fewer physical resources—than we would find in even our smaller studios. The reason I advanced might very probably have been advanced because of rather than in spite of this lack of facilities.

"Because of those limitations, perhaps they could not perfect their scenes as we do here. They did not have the means of achieving everything as we do. Instead, whether they wanted to or not, they had to be realistic."

Lubitch feels, too, that there may be other, more personal reasons for Hollywood's exaggeration of perfection. Actors, he points out, have at times been accused of acting more for their fellow-actors than for the role; directors, of directing more to gain the plaudits of their fellow-directors; critics, of writing their reviews more for what fellow-critics will think of the review than what the reviewer really thinks of the film. Cinematographers, he continues, may just as easily slip into the pitfall of planning their shots more for the approval of their fellow cameramen than for the intrinsic value of the scenes themselves.

"I don't mean this is a baldly literal score," he says, "but suppose I ask Victor Milner to photograph a scene in an absolutely realistic way. That may mean that he must underplay technical perfection. He must do many things in

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what, in a third picture, he'd be a crude way.

"Of course he will try to do it to please me as a fellow worker. But with such successful 'color' he will unconsciously polish it up a little. Always in the back of his mind will be a little worry about what Charlie Lang—and the Vic Milners and Charlie Langs in every other studio—will say at seeing him do a scene so crudely.

Slap on the Back

"Of course, I can't blame him for it. That is a pitfall our directors fall into, too. It is so much more pleasant to get a slap on the back from our fellows in the Directors' Guild than to receive the unseen, unheard and unexpressed approval of audiences we never see."

"But think what we would gain! Our pictures would be more real. Audiences would be less conscious of having seen a picture, and would more nearly feel that they had actually experienced things with our players. And of course from

the production point of view, this isn't too much of the fact that this way it would take less time to make each scene. There would be less time spent on hypercritical technical polishing.

"But understand, I don't say every picture should be treated in this ultra-realistic fashion. Some types of story demand it, others cannot stand it. Making a picture like 'The Love Parade,' which Victor Milner photographed, or 'The Merry Widow,' which Oliver Marsh filmed, I would insist as the ultimate of technical polish, for such scenes must have romantic camerawork that idealizes sets, players and story."

The question was asked whether color might not be a device to the end of realism, for the color camera cut at times be brutally frank. That, to Lubitch, would depend on the advancement of the color process used.

"If it gave perfectly natural color," he replied, "yes. But our present color processes do not give completely natural color yet. They exaggerate and over-

emphasize some colors. For instance, looking at you I am not conscious of the color of your necktie. But in a color cinema the camera would automatically take some stripes in just gray too, and I could not ignore its color. That would defeat true realism in every scene."

Really, Who Ever Did?

Another thing that defeats realism in many instances is the great attention to detail in designing and dressing sets. "We have all seen sets representing apartments in the 'actress,' he comments. "But tell me—did you ever see an apartment in real life that was so spacious, so perfect architecturally, and so completely spot-and-span as a movie apartment? Our art directors try so hard to make their rooms seem 'typical' and architecturally perfect, that all too often they succeed only in reducing all the character out of them."

Encouragingly, Director Lubitch does not feel that such photographic realism is unsuitable in Hollywood. "By no means," he concludes. "It has been and then been achieved already in Hollywood-made pictures. But there were isolated instances. For example, there was 'Fury' last year, a realistic story, which Joe Ruttenberg photographed with perfect realistic camerawork."

"On the other hand, both before and since, there have been plenty of films which laid claim to realism, but which, to me at least, seemed just a bit too photographically perfect to be real. Do not misunderstand, though, I do not say this more generous treatment should be applied to every film."

"It would be horrible in a western, for instance, and completely out of place in a romantic mythical-legendary melodrama like 'The Princess of Zenda' which, by the way, James Wong Howe photographed exactly as it should have been photographed."

"But since realistic camera treatment is sometimes necessary, and since some films have proved that our cinematographers can use their cameras realistically, my whole purpose is simply to remind Hollywood's camera men that at times they can prove their artistic greatness by conscientiously subduing their acknowledged technical greatness."

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Mount Everest, the story of which was told in the book "Top of the World." He is rated a most capable man and is one of great popularity.

The highlight of the trip was declared by Dyer to be without question the night the bomber on the nose of which his two cameras were mounted followed the course of the Tames River and flew over the city. It was to be a big scene in the story of "Shadow of the Wind."

City as well as Imperial authorities despatched in warning rigid rules prohibiting appearance of planes over the river and the City. The occasion had been deferred until a Saturday night, because at that time Parliament would not be in session, and the bomber flying in advance and photographing eighteen pursuit planes was due to pass over

many prominent buildings at an altitude as low as 500 feet.

So low did the plane pass St. Paul's Cathedral the cameraman declared, with a faint trace of a wink, that had he not put out a hand he easily could have caught one of the famous pigeons.

Many weeks had been required to induce the Air Ministry and other authorities to consent to the flight of the squadron over forbidden ground—and water. To add to the difficulty of securing the permit was the fact the picture company wanted to make the flight at such a low altitude.

At 7:30 all the lights of the City had been turned on. Suddenly Circus was lit up like a church, as the American remarked, with its neon signs Shell Mexico Petroleum's Building was a beautiful sight. All volunteer search

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Dyer Flies Over London

(Continued from Page 17)

waiting for the appearance of the necessary photographic factors."

Over Mount Everest

Associated with the American cameraman was S. B. Bennett, a Britisher for whom the former has deep respect. Bennett was a member of the recent English expedition which flew over

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It was a thrilling sight when the squadron left an airport eight miles be-

low the city, twisting and turning in following the serpentine course of the river. When the Cite was reached the armada crossed over among other famous buildings and structures London Bridge, the houses of Parliament, Waterloo Station and Buckingham Palace.

The flight lasted just long enough to be covered by 400 feet of film, which at 50 feet to the minute will tell that story. Although the pilot of the photographing bomber did not beat its record speed as far as safety would permit nevertheless the American had no pleasant time standing in the open exposed from the waist up to the pressure of 175 miles an hour. Strain a plevy was put on the belt which held him to his harness.

It is unlikely there will be a repetition of the permit. Traffic on the bridge because so congested from the moment the planes first were heard until long after they had passed over it was a long time before it could be untangled.

The plane assigned to Dyer and his second cameraman, Kat Norton, as a rule was a bombing ship with a speed of 550 miles an hour. It was streamlined and not heavy according to present standards. While it had been one of the best planes it now has been superseded by faster and heavier craft, and no longer is in the front line.

Two Cameras

Dyer had his two Bell and Howells fastened on a single gun head on a



S. M. Bennett operates English cinematography and is master of Kite's Dyer in his photography on "Shadows of the Ring." One of the scenes of the film and Maud Bennett, the photographer personally in most popular among his associates.

converted machine gun mount. They were so fastened one faster operated the two, which could be separated by a switch. Usually they were hooked together, as a matter of insurance for one reason. The two cameras had been adapted for aerial work.

One instrument was equipped with close-up lens and the other with a wide angle, which gave variety and shifty exactly to interest. Owing to the severe wind resistance encountered at a speed of 135 to 200 miles an hour it was



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impossible to use magazines in excess of a capacity for 400 feet of negative.

Under the ship, in a cockpit ordinarily occupied by a machine gunner so placed as to protect the craft from hostile ships coming from underneath, was parked Ray Norton, second cameraman, with his Akaflex camera. It was an independent housing which by a simple releasing lever could be turned in any desired direction, and was so low it just

barely cleared the ground on landing.

Before the trip was over Mr. and Mrs. Dyer visited England, Ireland and Scotland, France, where he made quite a stay at Marseilles; touched on the Spanish border, where he was within seventy-five miles of the fighting zone, Italy, Hungary, Czechoslovakia, Austria, Germany and Brussels.

A second installment of this story will appear in an early issue.

Jamieson Completes Portable Motion Picture Laboratory

WHAT is believed to be unique in developing machine installations has been completed by the Jamieson Film Laboratories for the Melton Barker Productions.

The latter company has been engaged in the production of local children's pictures in the last few years in the South-west territory.

Faced with the uncertainty of processing facilities in moving into new territory, Mr. Barker requested Jamieson's to figure on installing a half size developing machine in a trailer.

The result was a trailer of 22 feet and 6 feet wide inside. A space 5 by 8 is taken at the back for a bedroom leaving a room 16 by 16 for the laboratory proper.

Tanks are 5 by 5 feet, of stainless steel, using 12 gallons of solution and holding 150 feet of film. To save space small rinse tubes from developer to hypo and from hypo to wash are placed above the tanks and will swing out of the way for removing racks.

Temperature control is effected by pumping water through copper tubing added to the sides of each tank. An incubator holding one hundred pounds of ice will operate the machine for half a day in hot weather and a 2000 watt elec-

tric heater will maintain the proper temperature in the coldest weather.

Steady Temperature

A constant pressure regulating device maintains a constant flow of cooling water in any predetermined amount making it possible to maintain a constant developing temperature within one half degree of 68 degrees.

The nature of speed control and air compressor are mounted on top of wheel housing extending out 12 inches from

wall. Tanks with insulation add 20 inches to this, leaving 20-inch side and a 12-inch cork table on the other side. The circulating pump is placed under the corked.

An instrument panel contains a speed indicator, remote dual thermometer for developing temperature, a thermometer for room temperature, cooling regulator and a switch box.

Upon leaving the wash water the film passes through an air squeegee to remove surplus water and on to a drier which holds 1700 feet. This easily handles 2000 feet an hour which is the capacity at four-minute development.

The drier is 30 inches wide and 6 feet long enclosed with glass doors. Air is drawn from the trailer and exhausted to the outside through a light trap.

The trailer has been used on several pictures.



Technicians Meet

At a meeting of the Technicians Branch of the Academy January 19 at Paramount Studios papers were read by Dr. Herbert Meyer and Wilson Leahy on the new Agfa picture film and by Gerda Chambers and Gerald Best on the new Eastman sound recording film. Gerald Ricketts presided.

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Left—Prof. H. A. DeVry
and Norman Alley



What About Me?

(Continued from Page 97)

The January issue of *American Photography* prints a complete and very illuminating article by Varden and Harman Junior of the Agfa Arson Corporation of New York on Agfa's new Hi-Speed stock. If the news stands can't supply you with a copy of the magazine at this writing you will find a well worn copy in the A.S.C. files.

Don't forget that PAUL PERRE is at present located in Buenos Aires, S. A., where he has established a laboratory and is pioneering general motion picture photography. His brother, HARRY PERRE, can be reached by writing to care of A.S.C., Hollywood. Leo Toren will do Lammont's "Conquest Grove" . . . Artur von Tonn is doing "Crime School" for Varners.

My assistant says, "A reputation does not make a beautiful close-up. . . . That's what you photograph today that counts."

That yesterday's ideas are old-fashioned. That the first twenty-nine years of "throwing the tape at the cut" is the hardest. . . . That less camera and film manufacturers can't SELL cinematographers' light balances.



Universal Film Laboratories has just completed installation of automatic developing machines in portable motion picture laboratory.

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American Cinematographer Amateur Movies Section



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AGFA 16mm FILMS



AMATEUR MOVIE SECTION



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Contents....

Major Theatre Sound Apparatus Put
Behind Home 16mm Projection.... 78

Columbus Studio Professionals Barred
by Cuts from Regular Work.... 72

Competitors in Cinematographer Con-
test Gave Jury Plenty to Do... 74

"Film and School" Textbook Teaches
Screen Evaluation..... 76

How's Complete Musical Scores for
International Prize Winners..... 79
By Wilhelm Stahl, A.S.C.

Authority on "What It Takes" Writes
Views on Workmaking..... 81
By Duncan MacD. Little

"Hints and Gadgets" Contains Tips to
Working Cameramen..... 85

Notes of the Movie Club..... 86

Major Theatre Sound Apparatus Put Behind Home 16mm Projection

Angelino Designs and Builds Residence Around de
Luxe Equipment That Realizes Dreams of Amateurs
the World Over—Three Projectors Have Flat
Throw to Eight Foot Screen—Living Room
Restored by Simply Releasing Screen

IT is no longer particularly unusual for an amateur hinner to dedicate a room of his home more or less exclusively to home movie projection. But when an amateur literally designs and builds a new home around a de luxe 16mm projection theatre—then, ladies and gentlemen, the proverbial dog has been bitten! It is news in a big way.

That is exactly what one California craftsman has done. He is not, be it understood, a projection rooster-crooner movie star or executive, but an ordinary business man with a passion for 16mm moviemaking, and the technical knowledge wherewith to create a sub-standard second and picture projection layout in many ways superior to the best that can be found in many 16mm movie houses.

On the other side of the ledger, the room's modest, he refuses to let us even whisper its name which, for this achievement, certainly ought to be heralded in big type.

For our own part, we'll be hanged if

we'll call a good guy "Mr. X" or anything like that, so we'll simply forget about names and tell you what we saw and heard the other day when he ushered us into the finest amateur (or professional) sub-standard projection room we've ever seen or imagined.

He took us into the living room of an obviously new and very livable home, and said, "Well, here it is. Find the projection-room!" We looked around. At one end of the room was a big bay window with a comfortable looking, recessed seat. Thirty-two feet away was the other end of the room, lined with well-filled bookshelves.

Behind the Bookcase

But—wasn't a mistake? A couple of these shelves aren't filled as solidly as the rest. There are three good-sized gaps between the books, and, yes, behind those gaps are placed projection portals.

When we had spotted that much, our host smilingly solved the rest of the problem for us. He strode down the

rooms to the recessed window-seat, and opened what seemed to be a cupboard door beneath it to reveal the masked cone of a low-frequency loudspeaker.

Then he raised the seat of the bench and propped it up, revealing a colossal, high-frequency speaker of standard theatre type. Then he reached up, and pulled down an eight-foot, beaded screen.

The "reserved seat" section of his auditorium consisted of an ideally-placed divan facing the screen, and the "general audience" could group themselves in chairs almost as they chose in the big 18 by 32 foot room.

Then he led the way to the projection booth itself. It was only with the greatest of fortune that we restrained from committing mayhem, muckstering and sandy other offenses, for it was the projection layout of any craftsman's dreams, and we frankly covet it.

The first thing that caught our eye on entering the 8 by 8 foot room with nine foot ceiling was of course the triple throat battery of projectors.

For 16mm projection there were two Ampex machines, equipped with 750-watt lamps and a very special sound pick-up. (We'll come to that later!) Beside them was a Bell & Howell movie projector, which, with its 500-watt lamp, succeeds in filling the big eight foot screen with a satisfactory picture.

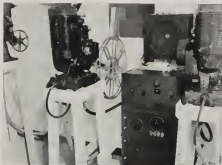
Each projector stood on its individual, wooden stand. The stands were built for maximum rigidity, and projectors, stands and all were rigidly anchored in place.

Glass Optical Flat

Attention next centered on the windows through which the pictures are projected. It is one thing to have efficient projectors—but it is quite something else to expect them to throw a good picture through ordinary glass, or even plain glass.

These three projection windows turned out to be the finest "optical flats"—optical glass ground and polished to eliminate all trace of distortion, with the two surfaces optically parallel.

Conveniently placed above these projection ports were three generous sized plate glass windows through which the



Two Ampex projectors and their amplifiers and Bell & Howell 16mm projector



Side shot of bookcase concealing three projection ports and three screen windows. The projection room floor is perhaps 14 inches above the level of the living room.

projector must follow the picture on the screen. In many theatres these secondary windows are small and absurdly slanted; but here they are ideal.

The projection, it may be mentioned, is as absolutely straight line from projector to screen. The lens of the center projector is directly aligned with the center of the screen. No chance for keystone distortion such as comes when projectors are either higher or lower than the screen!

Between the two 16mm projectors was the sound system's amplifier and control panel. A single master switch controls the power to the whole sound and picture installation, and separate switches, of course, control each projector. Another master switch, placed on the wall above the amplifier, controls the "house lights"—the lights in the living room—auditorium.

The sound pick-ups on the two 16mm projectors were specially built. They follow professional practice throughout, and assure far more nearly perfect movement of the film past the sound scanning aperture than is possible in commercially available 16mm sound-on-film projectors.

Ultra High Fidelity

This is an imperative necessity because of the ultra high fidelity amplifier system, which brings out sound qualities never heard on even the best commercial 16mm sound systems, and would naturally magnify any defects as thoroughly.

Our host told us—and we can believe him—that these special sound movements are freer from "flutter," "wow," and other evidences of irregular film movement than any 16mm sound system ever built.

The amplifier is virtually a standard, high fidelity professional type, capable of providing the finest quality sound for a theatre of 1500 seat capacity. Its output is 60 watts. With such power, the system, as can be imagined, is never extended to the full in providing acoustical entertainment for these audiences!

The amplifier is a massive, 24-tube affair with literally every refinement—equalizers, silencers, etc., that can

be found in a theatre type, high fidelity installation. The only difference, in fact, is that the sound is picked up from 16mm rather than 35mm film.

The sound is monitored through a loudspeaker in the projection booth. None of the monitored sound can seep into the auditorium through the six-inch, soundproofed walls.

Out in the "auditorium" the sound quality baffles description. It would be exceptionally fine reproducing from a 16mm high quality sound track; from 16mm, it is nothing short of incredible. We heard several records, including one standard 16mm sound-on-film test recording which we had heard several times previously on other projectors.

Do Many Things

At the risk of being guilty of abusing an overworked phrase, we must confess it sounded like an absolutely different recording from the one we knew it to be. This theatre type, high fidelity sound system brought out tone quality no portable sound system can draw from the film.

But playing sound film records is by no means all that this equipment can do. Inside the booth are two ana-synchronous disc record turntables by which ordinary phonograph records can be played through the big amplifier and speakers for scoring silent 16mm or 8mm films—or even for ordinary phonograph service. The radio, too, works through this reproducing system, with equally incredible results.

One might begin to wonder if, with these projectors, the amplifier and twin turntables, this projection booth might

(Continued on Page 37)



View of end of room in which screen has been drawn down like a window shade and fastened by small hook. The lot dropped exposing low frequency cone and, above, high frequency cellular speaker under tilted shelf.

Columbia Studio Professionals Are Barred by Cubs from Own Work

Amateur Group Preserves Status of All Members by Assigning No One to Do That with Which He Is Familiar—Writer May Hold Reflector But Cannot Work on Script

By BOB H. KING, S.A.C.

President Columbia Cub Productions

ABOUT two years ago the thought of an amateur movie club to be formed at Columbia Studio started to grow on me, and with a few friends I sent out a circular to the studio employees to get their reaction to such an idea. The response was instantaneous and overwhelming, and after our first meeting we started work on the first production, called "Lucky Peer."

We experienced the usual difficulties in organization and planning that any club in the embryonic stage has to undergo, but when our initial effort was nearing completion we decided to get together the old loyal standbys and weed out those who had lost interest—and reorganize. It was at this time we experienced our first symptoms of "growing pains."

It was discovered that we had many loyal members—in fact, too many for an ordinary club, shooting one picture at a time, to keep busy (incidentally, the only way to keep such a club active, especially in a busy studio, is to keep ALL its members busy at ALL times of production), so we decided upon the unit system.

Our plan for the coming year was to form four units—one major unit and three minor units.

Four Units

Our Unit B, Unit C and Unit D were to make simultaneously one picture over a period of three months (shooting only Sundays and a week night occasionally), and at the end of this period take the results of each unit's activities, project them before the entire club for criticism, discussion, suggestions and selection of various outstanding qualifications in each picture.

This three-month period may seem long, but we allowed for accidents and disappointments, because it was essential we have 100 per cent attendance on each shooting day.

Each of the Units B, C and D are complete in themselves, with staff of supervisor, director, assistant director, cameramen, editors, cost etc. Each unit is entirely controlled, independently from its competitor units, by one of its members, usually designated by the title of "supervisor."

Story selection, assignment of staff and casting all have to go through his hands; locations are approved by him,

and he lines up shooting schedules. From there on most of the responsibility rests with the director and his staff.

At the end of this three-month period, when the pictures made by these three independent "producers" are screened, the officers of the club form a Unit A, drafting its members from the three units participating in the first unit's production, taking, for instance, the best directing effort, the best camera work, the most likely of the cost and so on, until they have formed a complete A unit.

One Major Unit

Unit A is now ready for the making of a picture, the story already having been selected by the officers, and they proceed to make one major picture for the club, the officers acting in official capacities for that unit.

The three other units have been depleted in ranks, but new members coming into the club will take care of this loss of personnel and we then have four producing companies in full swing.

The system at that point begins to operate as before for the next three-month period, and for every three months thereafter repeats itself. After Unit A has completed a picture the staff and personnel (except the official who has come originally from the three minor units) are given different assignments back in the minor units for another "judgment day."

Members dropping out of the club and members joining the club keep its personnel fresh and active at all times.

Our total membership runs about fifty, pretty evenly divided as to sex. This leaves approximately twelve members in each unit, which is sufficient for our purposes. During our first three-month period, of course, there were a few members not actively engaged in production, but we managed it so that these members were our story writers and they were kept busy writing a suitable story for our first Major picture.

Seven, or Eleven, as Preferred

However, as we have experience in both the making of Seven and Eleven pictures we leave it up to each unit as

to which they prefer. Each unit bears the cost of making its own picture and the cost of the major picture is borne by the club fund.

They hold their own meetings, separate and apart from each other, and apart from the regular club meetings held twice a month.

Production Unit A, in making their choice for talent from the A, B, and C units, base their selections upon merit or ability as demonstrated on the screen and do not take into account whether Seven, or Eleven, film was used.

Selections are made by the president, vice president and secretary-treasurer with the aid of the heads of the three independent units.

In our application for membership forms we have asked prospective members what particular line of endeavor they wish to follow. Sometimes they want to try acting, sometimes camera work and a lot of times directing.

As closely as possible we follow their desires in making assignments, but we always ask for their second and third choice. After they have completed a picture as an actor their next assignment might be holding a reflector and their third to be a director. In this way each member gets a broader understanding of the problems which face professional motion picture companies and in practically all cases our method works out to perfection.

Regular Show Plans

After a year has elapsed one member might be in turn script clerk, wardrobe, cameraman, actor, writer, director—all according to his desires and his talents.

In our club membership are included a few members who, while they are amateurs as far as actual picture-making is concerned, might be called "professional" in a strict sense of the word.

Instead, he puts his efforts into a line totally unfamiliar to him and to which he is actually an amateur. The same procedure is true of a writer. No stories can be accepted from a member who makes his living writing.

This system makes for splendid results with our club of approximately half a hundred, and we have little if any friction on our shooting days, because each member has a specific duty to perform and is accountable only for that work alone.

COLUMBIA CUB PRODUCTIONS
PRESENTS
THE CAST AND CREW OF ITS FIRST EPIC
"LUCKY PIECE"

—Reproduction of card posted in Columbia Studio following completion of undoubtedly the first and probably the last amateur picture to be made in major studio with major 35mm. equipment.



Top row, L to R
—Bill Hurian
and Don Star-
ling, two leads in
Lucky Piece
Bob King, Presi-
dent of Columbia
Cub Productions
Bill Hurian is
another part.



Next row—Comping on
location at Metropolitan
Avenue. Lining up for
final exterior shot, Miss
Gutchie looking through
camera

Next row—Relating be-
tween shots, Miss Kamp-
schner and Charlotte
Richards Two principals
in a scene from "Lucky
Piece."

Bottom row—Al Keller,
director, at right looking
for an interior. To his
watcher (opposite) Still
by Bob Kampschner.



Competitors in Cinematographer Contest Gave Jury Plenty To Do

'Ships of Sydney' Wins First Laurels Because of Photographic and Artistic Technique—'Mount Zao' Presents Sharp Contrast to Former Japanese Film—John Walter Only 8mm. Entrant to Hit First String

By One of the Judges

THE 1937 international amateur movie contest of the American Cinematographer is now history. For those of us privileged to sit as members of the judging committee the end of the contest marked the termination of a three-week period during every afternoon of which we assembled in the library of the A. S. C. clubhouse for a two or three hour session of viewing and reviewing contest films.

In this connection, the word "reviewing" is used in its most literal sense, for the preliminary judging of the contest was done by a process of painstaking elimination, few films were viewed by the judges less than twice, and in many instances comparable films were run and rerun before the judges regrettably decided this one or that must be eliminated.

So close was the competition that in many instances these decisions were extremely difficult.

In the final judging, however, one film

stood out above the field. This was James Sherlock's beautiful kodachrome entry, "To The Ships of Sydney." With the exception of one short sequence in which the intense illumination of a sunny day and white-sailed ships apparently proved deceptive, the photographic and artistic technique of this film were virtually flawless.

Photographed under widely varying and often difficult conditions of lighting and subject matter, this film is of almost professional excellence in the uniformity of its exposures and color renderings.

Composition Strong

But much more this, what won the film its high ultimate place was the outstanding excellence of its composition. As one member of the committee remarked, Sherlock's treatment had taken what ordinarily would be matter-of-fact shots of the docks and shipping of Sydney and, by skillful composition, made them into a superlatively beautiful—and

interesting—production. Truthfully it can be said that without this excellence in composition "To The Ships of Sydney," good though it was in every department, would probably not have placed as high. But with consistently excellent composition added to sound photographic and production technique, "To The Ships of Sydney" was the outstanding film in the contest.

An almost equally outstanding entry, though in black and white rather than in color, was Khep Tsukamoto's unusual film, "Mount Zao." From these exceptions, the American Cinematographer's annual international amateur movie contests have been marked by the strong competition offered by Nipponese entrants.

"Mount Zao," however, offers a decided contrast to former Japanese films. Instead of being in the distinctly pictorial mood of Okamoto's many excellent films, and from prize winners—that delicately pictorial blending of tender sentiment and restless high key shots of cherry blossoms and rice fields which many of us had come to regard as typical of the best Japanese camera work—"Mount Zao" is a rugged film, admitted by heavy filter correction and retouching of such products of the great days of German movies as "Fritz Pals" and the foreign-made portions of "The Doomed Battalion."

Uniform Exposures

Its action is kept to the far higher tempo of a thrilling mountain hike-run. Quite apart from the excellent handling of this action and the compositional and filtering technique which take full advantage of the weird formations sculptured by heavy snow on trees and rocks, Tsukamoto is to be congratulated on the uniformity of his exposures, faced as he was with the always difficult problem of brilliantly lit snowfields and dark clad people. The film also contains touches of humor seldom seen in the work of Nippon's serious-minded cameramen.

Charles Carbonaro's entry, "Little Sherlock," excellently illustrates the problems faced by the judges, for it was outstanding in no less than three categories—as a scenario film, as a home movie, and in photography—and made



Heavy load several feet behind him is an arrangement of items used with the heavy load mounted far up to studio and newspaper. In addition to the equipment furnished a complete outfit also has been made available, including the cooperation in planning and editing of films, etc.

in addition a strong fight for the grand sound.

Photographically speaking, it continued without doubt a number of the best interior lighting effects in the content, including some unusual ones like, for instance, one in which all the lighting apparently comes from a 16mm projector being used to run a roll of film. The lighting throughout the picture is more than ordinarily excellent, while the story and direction make it in every way a fine production.

In this connection, one of the honorable mention films, William Murphy's "If Rugs Could Talk," deserves special mention. Consisting of close-ups of hands and feet in a manner perhaps too reminiscent of the still remembered 1932 prize film, "T'd Be Delighted," "If Rugs Could Talk" was a technical achievement of the first order, for it consisted entirely of interior scenes, made by artificial light, and photographed entirely on positive film, reversed-presented at home.

Lighting an Achievement

When it is considered that the DuPont positive film used has, under artificial light, a Weston speed on 1/6, the lighting achievement can be appreciated.

In the scenario class, J. Kinsey Moore's "True Winner" lived up to its name. It represents a very marked improvement over his last year's entry, "Nite Life." While in monochrome, and not embellished with the remarkable special effects camerawork of the previous entry, "True Winner" represents attention to photographic details seldom seen in non-professional films.

The compositions, for instance, are dramatically telling; the direction timing and action could scarcely be improved; they certainly show very few of the usual amateur shortcomings.

Again this year, T. Lawrenson, in partnership with his delightful youngsters, now grown to an energetic four-year-old, serves as the premier example of what can be done at home with a movie camera. It is probable that much of the action of this tale of a little Scotch boy's Christmas was carefully staged, but on the screen it certainly does not appear so.

"Another Happy Day" has the spontaneity which should characterize the true home movie. Little Ian and his family do not appear to be "acting," neither are they consciously posing for a picture. They are simply and naturally enjoying themselves, quite as though no camera was about.

Naked Meet of Equipment

Yet Lawrenson's technicalities are very well thought out. His camera angles, especially in the sequence where Ian enjoys his toy train, are graphic. As usual, his transitions are smooth. Among them may be mentioned one from a pictured Christmas pudding on a Christmas card dissolving to a close-up of the real pudding.

Again there is a similar transition from the top-hatted newspaper man and his daddy make on the lawn to a similar "know" figure on a great frosted cake.

Yet another point in Lawrenson's favor is the fact that while the film, to expert eyes, appears to have been made with a minimum of technical resources, the result on the screen certainly is most capable.

Another outstanding job was that jointly entered by Mel Westlander and Harry French, "Soleil Prelevé." This highly imaginative story of a rocket voyage to a mythical planet was featured by a display of miniature work more than a little reminiscent of "The Lost World."

Perhaps a Walt Disney might point out that the animation of the miniature people and monsters in this film fell short of the ultimate in smoothness, but on the opposite side of the ledger even a Disney must place a high mark for imaginative conception.

It is incredible what a monstrous beast can be created from a peanut and a couple of feathers—if one has imagination! The manner in which full scale action was filmed and intercut with the miniature is most prize-worthy, and an especial bow must be given the way the "black lightning" was created in the full-scale exterior scenes by dextrous manipulation of a graduated filter.

Four-Way Contest

Dr. R. E. Gentzen's educational film, "Japan and its People," offers an unusual candid-camera study of these folks at work in city and country, and even warshiping in their temples. The photography is excellent throughout, and the film's only flaw is perhaps an over-restraint in the use of titles.

Competition in the twin categories of scenic and color films proved especially

close. Demonstrative of the universal acceptance of kodachrome is the fact that not one scenic picture in monochrome was entered.

Entering the home stretch, it became a four-way contest between Scott Moorhouse's "This Side of Paradise," the Yarnell-Kimball entry, "Europe Touring," R. C. Denney's "Scenic Wonders of the Southwest" and Sherlock's entry.

Picking the two winners from these was one of the most difficult tasks faced by the judges. In the color category, Moorhouse's film—a truly beautiful impression of the region around Lake Lugano, in Switzerland, finally won out.

For the technical excellence of its color, this film could scarcely be improved upon, though its compositions often suffered from a consistent weakness for allowing too much headroom, and consequently cutting things off too sharply at the bottom of the frame.

The color rendition, though, were superlative, and a number of scenes were made in what were obviously very difficult set-ups, such as those presented in a sequence in a veranda cafe under a canopy of leafy vines. This film also had the best color titles in the contest.

In the scenic class, Effe Yarnell and C. Y. Kimball's "Europe Touring"—an 800-foot subject in kodachrome, detailing a tour of Denmark, Sweden and Norway—added to consistently excellent color-photography a treatment which showed not only what the tourists saw but the people they saw as well.

Near Perfect Score

As neatly as the writer can recall his own scoring of the film, the production earned a perfect rating for camera tech-



How close shooting in color (the well-lighted) and Kodak's economy in color (the "darkening") at the entrance left to Turner Hallway, L.S.C. Next to frame (from north to left), group-around tree photograph and Donald Graham, center (left) looking. The man on the floor shooting was Scott Moore and his mother Mrs. Moore. The scene in the picture is the scene from the film "Europe Touring" photographed by Scott Moore.

ages by the narrow margin of three scenes made in a Norwegian wharfed on a rainy day! To offset these were innumerable scenes of remarkable excellence, including one grandiose sequence of the righteous illumination of a great amusement park in Copenhagen.

Deasy's film, which secured the Weston Instrument Company's special award, was an equally remarkable presentation of the wonders of our own country. This film was made on an extensive vacation tour of all our southwestern national parks and monuments.

As such, it was necessarily filmed under a wide variety of weather and lighting conditions, and filmed, in the main, most expeditiously. A two-reel film, "Scenic Wonders of the Southwest," suffered somewhat from repetition of similar material and would, in the opinion of most of the judges, have benefited in much sharper cutting.

On the other hand, Cinematographer Denby drew the unanimous praise of the judges for the manner in which he varied many regions which have been pictured to death, yet managed to avoid the beaten path.

No mention of the color entries, in this contest would be complete without mention of Eugene Nuttmann's unique entry, "Garden Life," which deservedly won the Harrison and Harrison award. This was filmed almost entirely in stop motion and showed the growth of a variety of different flowers and plants.

Galler Wins as Best.

As several of the final judging committee remarked, few if any professional films of the same type have taxed their successive single frame exposures as accurately and shown the actual growth of the plants so smoothly. In addition, the composition in several of these shots was remarkably effective.

The sole Best entry to garner a major award was John E. Walter's "El Camero Real," a two-reel Span-look-alike document chronicling the California mission. Far more than showing these historic buildings excellently, the film evidenced a remarkable grasp of fine photographic composition. There were very few scenes indeed in the two reels of this film which did not evidence the highest order in its making.

"Engineer's Daughters" Good

Four Best films, however, found places among the honorable mentions included among these may be mentioned Earl Cochran's "pay 90's" melodrama, "The Engineer's Daughter," which, in addition to being most amusing, was well photographed, excellently acted and constructed, and a more than ordinarily creditable job of production.

It suffered, however, from a few staidly technical shortcomings—namely in directing.

Ferment among these was the fact that direction of movement in interval scenes was frequently confused.

Another notable Best entry was William Poulson's "Discovery." This film had a strikingly unusual theme and one which was slow to grow upon the spectators. But grew it did, and had the cinematographer-director been able to lavish a bit more attention on the pictorial attractiveness of some of his shots, and had he, as producer, clarified his plot with a few more titles, the film might well have been a winner.

It is, however, a notable production, for seldom if ever before has an amateur filmer attempted to put on the screen so unusual a story.

Bridge Picture Group

Ranking high in both the categories of educational films and color, Raymond O'Connell's film of the "San Francisco-Oakland Bay Bridge" is also outstanding. He tells the tale of this great work of engineering very effectively, using the quiet cuts to close shots of a miniature of the bridge to clarify his long shots of the real bridge itself.

This entry was also in many ways the outstanding example of Best color shown.

"Klugeverson," the entry of Ross Vogel of the Los Angeles Film Club, was an excellent black and white scenario film. Its main weakness lay in uneven lighting and composition.

In the educational class, E. N. Harrison's two reel subject, "The Least Tern," was excellent. For general showing the film unquestionably did have too much repetition, but for strictly educational use this would be an asset.

More serious was the lack of necessary explanatory titles. The photographic technique was truly excellent, for virtually the entire film was shot obviously have been made with extremely long focus lenses, shooting from a blind, and the results on the screen were practically perfect.

Yet another highly meritorious film, this time one in black-and-white, was



Scene in Twentieth-Fox's "The Business and Mr. Butler" with Arthur Lee, golden haired heroine to the American music and Hilson French, with the spectators, Arthur better acquainted to the stage comedy. From left to right, Arthur Lee, director, Paul Leckband, assistant cameraman, Grev Bryant, assistant director, Joseph LaSalle, assistant cameraman, Arthur Lee, L. Bess, paffer; Arthur Miller, director of photography.



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EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

Rudolf Harts' "Under Your Own Power," a film document of a trip to the Caucasus, highlighted by excellent color photography and often by fine composition as well.

Good Documentary

Like many of the others, however, Mr. Harts should pay more attention to the always important matter of keeping directions of movement consistent from scene to scene.

W. N. Rucker deserves attention for the entry of five separate films, each devoted to the service given by some municipal agency of his home city of Cleveland. For a straightforward, factual presentation of his material, Rucker's films could scarcely be improved; but if,

as is probable, he made these films to separate his fellow-citizens with their city government, it is to be regretted that he did not essay a more imaginative treatment.

In all of these productions the personal element could easily have been stressed more, turning the films into entertainment as well as instruction.

Last, but by no means least on the list of honorable mentions, is Duncan MacD. Little's "Voyageur's Trail," a news film of a four-day canoe race in Canada. This film, photographed perforce under what-ever conditions happened to obtain at the moment the action occurred, represents a considerable achievement in amateur news filming, for which Little is to be commended in the highest terms.

'Film and School' Textbook Teaches Screen Evaluation

FROM the press of D. Appleton-Century Company, 35 West Thirty-second street, New York, has come "Film and School," a handbook in moving picture evaluation. It is a publication of the National Council of Teachers of English and was written by Helen Bond and Richard Lewis, with the advice and counsel of Edgar Dale and the late Sarah McLean Maule.

The first of the four comes as chairman of the committee on standards for motion pictures and newspapers. Lewis is credited to the Glendale (Cal.) Junior College, Duke in the Bureau of Educational Research, Ohio State University, and the last named to the Abraham Lincoln High School of Los Angeles.

The book has 182 pages, plus 40 pages carrying 51 illustrations of various phases of photoplay production discussed in the text. The contents carry a half dozen major departments, in order being Moving Pictures, a Social and Educational Force, How Moving Pictures Interpret Life, The People Who Make Moving Pictures, Rating Scores, Reviews and Criticism, Moving Picture Clubs, More to Be Done, etc.

In the first section, for example, the subheads give an insight into the range of subjects discussed. These are: The Rich Man, Poor Man Pattern, Who Is Funny? What Is Funny? Are Young People Taken Seriously? Friendship and Love, What Makes Criminals? Our Attitude Toward Other Peoples, Who Makes War?

The two initial paragraphs of the introduction give an insight into the general objective of the authors. These follow:

"When we consider how much time young people, and adults too, spend in moving picture theaters, we know that education is not confined to schoolrooms and does not all come out of textbooks. We have 'more made children,' we are more made people, and the movies are already a part of our education. Our

task now is to correlate them with other activities offered in the school program.

"We neither condemn moving pictures wholesale nor advocate them. We try to evaluate them. We are engaged in setting up standards for judging them. That is why we usually say 'evaluating moving pictures' rather than 'moving picture appreciation'."

Ten pages are devoted to "Moving Picture Clubs," meaning school clubs. Suggestions are given for organizing and conducting such a body.

That a book published at the end of 1937 designed to aid in the evaluation of screen products freely employs such expressions as "moving pictures" and "movies" will interest those who may remember the controversy that raged a quarter century earlier over those same terms.

Moving pictures was the term employed in the beginning. It was used without question until there arose disciples of a school which insisted pictures did not move—they must be described as motion pictures. And gradually, by constant consent motion pictures prevailed.

The Moving Picture World, a trade publication, was founded in 1897. During the approximate twenty years of its life the title was not changed, although in the later years of its existence the term "moving" picture seldom appeared in its columns.

One of the rarer features of this trade paper for exhibitors was an educational department conducted by a person who each month "shed barrels and barrels of tears" over the growing use by children and "thoughtless adults" of what he termed the abomination of "movies."

The children win, as they were bound to do. And adults have helped them out. But so, theoretically, was that inhibition as "movies" hurried into the consciousness of this writer, while always conceding its unimpeded use by

children, that even today when compelled to refer to "movie movies" or maybe "Amateur Movies"—you understand—be experiences a twinge of what takes the place of conscience such as may follow upon the use of profanity that sinks a little lower than his accustomed depth.

But "Film and School" is an interesting book—interesting not alone to those whose duty it is to teach the young and near young but also to men and women who in years recent and remote have been within and on the fringe of the amusements world.

Duncan Little Broadcasts 'Film Planning' Over WNYC

On Wednesday, January 19, WNYC-Municipal Broadcasting System, under the personal supervision of Mayor F. M. LaGuardia, offered the third in a series of programs devoted to amateur movies. The guest speaker for the broadcast was Duncan MacD. Little, charter member of the Society of Amateur Cinematographers of Hollywood and liaison officer for the United States of the Institute of Amateur Cinematographers of London, England.

Mr. Little has for years been collaborator with the Hon. Arthur Bergeson of Quebec regarding dramatics in the St. Maurice region of Quebec Province. Strictly an amateur, Mr. Little has exhibited films extensively throughout the United States, England and Canada, and often under governmental auspices.

The topic for the session was "Planning a Film," and Mr. Little with a wealth of experience and sharp new ideas brought a freshness of viewpoint that often is lacking in a maker of amateur movies who has been a veteran of fewer years.

Cinematographers to Make Their Own Annual Award

Special rules to govern the camera awards as worked out by the rules committee representing the photographic section of the Technicians Branch of the Academy have been approved for use during this year's awards program by the Academy Awards Committee.

Novation procedure this year will follow that of last year. Each Director of Photography in the industry will be asked to name the two productions which he considers to represent the best cinematography of the year, either naming productions photographed by himself or by another director of photography.

From the list of productions suggested by the cameramen themselves a committee of representative cameramen and photographic experts will select the three productions to be nominated for the Award.

Rather than having the nominated productions voted upon by the entire Academy membership, this year's selection of the one production to receive the Award for Achievement in Cinematography will be made by a vote of all directors of photography in the industry.

Here's Complete Musical Scores for International Prize Winners

THE prize-winning films of the American Cinematographer's 1937 international amateur movie contest covered an unusually wide range, both geographically and dramatically. Accordingly, the musical scores arranged to accompany them at their showings before the Los Angeles cine groups also covered a broad range, not only in the varied types of music necessary but in the complexity of the scoring.

Perhaps the simplest of the scores was that used for C. J. Carboneau's winner of the Victor Annamograph award, "Little Sherlock." This film is very positively divided into four dramatic elements, or more correctly, into sequences dominated by one of four definite dramatic themes. It was therefore possible to work out a flexible, thematic score for the film using but four records.

The introductory theme centers around little Alice, and here and wherever Alice dominates the action we used an organ recording of "Moonbeam Dance," by Gibbons, played by Tenace Chas on (British) Columbia Record DB333.

Alice's father's mooncaking is the second dramatic element, so we have our second theme, which we accompany with "The Match Parade," by Walle, another organ recording, played by Synair Gustaf on H.M.V. (British Victor) Record B3887.

The third dramatic theme is the Thief, for whose musical theme we found Gounod's "Funeral March of a Marionette," as played on the organ by Quentin M. MacLenn on either Columbia Record 2281-D or British Columbia 6323. The fourth theme begins with Mother's return home to find the apartment robbed and her husband blackpainted.

It continues through Father's account of the affair in the police, and may even continue farther if you wish. For this theme we chose Leslie Ewer's "Lili of Laguna," as played—again on the organ—by Leslie Jones on H.M.V. Record B2932.

These five records can be alternated as to the action incidents, and as all of them are played on either Wurlitzer or Congolese organs they furnish an excellent "movie-organ" accompaniment.

For J. Kinsey Moore's appropriately named "Prize Winner," which took the honors in the scenario class, we again resorted to "movie-organ" accompaniment. And in this case accompaniment is the correct word, for this film required a score which would be more or less a passive accompaniment rather than a sharply defined thematic score

By WILLIAM STULL, A.S.C.

For the greater part of the picture we need slow, simple music, so we chose several selections from Rouse's "Miserable of Venice," incidental music suite as played by Quentin M. MacLenn. We begin with "Prelude No. 1," on British Columbia Record 3585. When this is played through, we change to "Prelude No. 2," on British Columbia Record 3586. Then we turn over the first record and, when the second is completed, play the "Porto Intermesso" (British Columbia 3585).

The final part of the picture, beginning from the time the old farmer helps the stranded woman, moment and has thrust upon him enough misery where with to reclaim his god, a rather lighter and more cheerful music is indicated. For this we use "Waste Chorus," by Kotler, played by Paul Mann on H.M.V. Record DG239.

Another simple score is the one used for that unique film, Eugene Ritzman's "Garden Life." For this striking depiction of flowers actually growing we

need light, graceful music. So we begin with Debussy's "Nuits" waltz, as played by the Royal Opera Orchestra, Covent Garden, under the direction of Lawrence Collingwood, on H.M.V. C1969.

When this is completed we change to Tchaikovsky's "Valse Serenade," as played by Oleg Gaboriowitch and the Detroit Symphony Orchestra on Victor 4835. As the sequence of shots of lilies begins we have on the screen a series of increasingly unusual blooms, so we turn to music that is also somewhat out of the ordinary, accompanying this part of the picture with Josef Strauss' "Delirious Waltz," played by the Berlin State Opera Orchestra conducted by Alois Melichar on Brunswick 36215.

To avoid an undesired introduction, start about 1½ inches in from the edge of the disk. For the finale, as the picture returns to the more familiar poppies and closes with the pansies which began the film, we return to the first record, "Nuits."

"Another Happy Day," T. Lawrence's winner in the home movie category, requires a more sharply defined score and, with one exception, light,



Don't guess too where the place in which Ritzman's "Prize Winner" scene is taking, director Lawrence Collingwood backs photographing young Mann, admirably a scientist examining a great discovery. Eugene Ritzman directs photography on the subject, Alice Kable and the still.

gay music to mark the happy mood of this delightful child, too.

Incidentally, these readers who remember the score used for Locomotion's winner of two years ago, "Happy Day" and notice the resemblance of two records from the previous score. But since Ian is featured in both films, and these two pieces seem particularly appropriate to his character, the repetition is inevitable.

Once again the opening selection is Kotelbey's "Well-wished Blue," as played by Albert W. Kotelbey and his Light Concert Orchestra on Columbia 30334-D. After the family has gone to bed the appearance of Santa Claus is the cue for a change of music, to "Colonial Song" (Grieg/Schmidt) played by the Victor Symphony Orchestra under Ricardo Bordone on Victor 35915.

As Ian enters Christmas morning to see his parents we change to the other side of the first record, Kotelbey's "The Clock and the Dresden Figures."

When Ian and his father start to run the new toy train I yielded to temptation and used a thoroughly anonymous record, but one beginning with a theme which overtones have associated with trains ever since its introduction in Lubetich's "Katie Carle"—"Reverend the Blue Horizon."

This is the first theme beginning HMV Record C2884 "Morris Carlo Selections," played by the New Mayfair Orchestra. This record easily can be dispensed with, if it is not available, for the particular theme used does not continue through the record. If it is available, however, no closing theme might be useful to accompany a later sequence in which Ian enjoys the traditional English Christmas fireworks.

However, the next record after the "Reverend the Blue Horizon" theme is a return to "The Clock and the Dresden Figures." To close the film we use John Strasser's "Thousand and One Nights," as played by Hans Schneider and a Radio Orchestra on Victor V54425.

Alan Scott Morcheuse, when he sent his film, "This Side of Paradise," which triumphed in the color section, thus fittingly sent in a list of the records he used as a score for his film.

Unfortunately, the scores we use have always been chosen from our private record collection, and although this collection is rather extensive I blush to admit I did not have even one of the records Mr. Morcheuse indicated, though I had nearly all of the pieces.

But my records were all vocal arrangements, and except in rare instances (such as demanded by one sequence of this film) it is axiomatic that vocal choruses—or even instrumental records with vocal choruses—should never be used in film scoring.

However, here are both of the scores for this film, if the proper records are available I am inclined to feel that Mr. Morcheuse's original score would probably be preferable. Certainly, his choice of a theme tune is the better, and I had this selection in an instrumental

prelude; I would have used it in post-score in my own choice.

Mr. Morcheuse's score. Theme tune "Vienna, City of My Dreams," Columbia FB1558; 3, "Voices of Spring," HMV B-4267; 3, "Nocturne sequence," At Dawn again, HMV B-4429; 4, "Gondra sequence," "Workings of Fate," Victor 19845; 5, girls dancing, "Wine, Women and Song," HMV B-4557; 6, girls singing, "Circumstances," Rex 4471-B; 3, "Coco sequence," "Santa Lucia," Decca P-45922; 8, St. Morris sequence, "Angels' Serenade," Columbia 9115; 3, closing sequence, "Vienna, City of My Dreams," Columbia FB1558.

My own substitute score began by using Strauss' "Tales from the Vienna Woods" for the theme tune, played in this case by Leopold Stokowski and the Philadelphia Symphony Orchestra on Victor 1684. I combined the themes for the Nocturne and Gondra sequences into one, using Strauss' "Swallows of Australia" as played by Decca Bels and his Orchestra on Decca 3222.

For the "girls dancing" sequence I used Gungl's "Bubbling Spring Waltz," played by Marek Weber and his Orchestra on Victor V-55052. Where the close-ups of the girl dancing are seen I for once break the established rule against using vocal records, and use Poulton's "Circumstances" as sung by Laurena Bell on Victor 1262.

By good luck, in the Los Angeles showings this synthesized perfectly. For the Coco sequence I used a melody, "Dance of Italy," Columbia V445-F.

For the St. Morris sequence I used Walter's "Seaside," by the Chermanski Trio on Columbia 136-M. And for the closing, following Mr. Morcheuse's good example, my score returns to the theme tune, in this case, "Tales From the Vienna Woods."

Tarnell and Kotelbey's winner in the scenic class, "Europe Touring," is arranged to give the ideal in scoring, for the music changes can be almost everywhere where they will be least disturbing—during titles.

The titles, too, furnish helpful music change cues. For the opening of this film, Part 1, or Gertrude's "An American in Paris," as played by the composer and the Victor Symphony Orchestra on Victor 35905, synchronous was admirably with the shots of Copenhagen's bicycle traffic.

The first cue in a title indicating "The Royal Palace," at which the music changes to the first record of Elgar's "Band of Youth" suite, including the movements known as Overture, Allegro Molto, Serenade, and Andantino, and played by Sir Edmund Elgar and the London Symphony Orchestra on Victor 9470.

As a close-up of the Swedish flag serves as a background for the title "Sweden" we change to "O Vännsland" (The Lovely "Ark Wansland [in Skina]") played by Josef Paternack and the Victor String Ensemble on Victor 19223.

At the title "Boating is a popular sport," we change to the second part of "The Wind of Youth," on the opposite side of the second disk used in this score, and including Mozart, Andante, San Duse and Presto.

At the title indicating "... across the Norwegian mountains" we change to Schubert's "Swan of Tuorila," played by Leopold Stokowski and the Philadelphia Orchestra, on Victor 7380. We play both sides of this record. By the time this disk is finished the party has reached Bergen, and we change to Loh's "Rhapsodie Norwegienne," played by Gabriel Porne and L'Association Artistique des Concerts Colonne on Odessa Record 123528. This completes the score.

Khori Tsakiratzis's "Mount Zan," using the photographic award, stresses two elements: the beauty and tempo. These, too, govern our score, affect they involve some rather unusual and highly original music, including even Romanian and Turkish tunes!

For the beginning we play "Fantasy Rhapsodies" (Stefanek), played by Alfred Kade and His Turgene Orchestra on HMV B-3862. When this is finished we change to "Cyprus Oriental Dance," an old Turkish folk song, played by the Cyprus Wanderers on Victor Y23.

As the climbers start up the mountain, through the word scenes, we change to "In the Mountain Pass," from Ippolito-Bruscia's "Caucasian Sketches," played by Roscoe Bourdon and the Victor Symphony Orchestra on Victor 35937.

Then, changing after the second or third shot after the party leaves the mountain cabin, we change to "The March to the Scaffold" from Beethoven's "Fur Elise" Symphony, played by Eugene Goemaere and the Hollandia School Orchestra on Victor 5955.

And as the skiers get well started on their thrilling run down the hill we change to the faster tempo of Strauss' "Voices of Spring" ("Frühlingsstimmen, Walzer"), played by Serge Koussevitzky and the Boston Symphony Orchestra on Victor 6042.

James Sherick's grand award winner, "To the Steps of Sydney," calls for music definitely changing with the various sequences and also definitely attuned to the pastoral beauty of the film. For this we begin with "The Massett Glade," from Kotelbey's suite, "In a Fairy Realm," played by A. W. Kotelbey and His Orchestra on Berlin Columbia 3576.

Coincidentally with the title referring to the topgait on a ferry (as we change to Lehar's "A Kiss at Dawn," played by Marek Weber and His Orchestra on Victor V5004).

At the end of this sequence, following the day shots of the great Sydney Harbor bridge and a title "To the hearty coasts—" we play Parts 1 and 2 of "The Paganini Homeward Pleds His Wary War" from Kotelbey's suite, "Three Fanciful Enchantings," recorded by Kotelbey and his orchestra on British Columbia Records N16 and N167.

At the title ending "... the industry of the Paganini River together

with its dockyards," we change to the opposite side of British Columbia Record 8406. "A Passing Stormcloud on a Summer Day," from Kiethey's "Three Faithful Sailors."

The next one is a title, "To the Lane Cove Ferry—," where we change to "Danse Wava Wala" (harmonic) on Columbia 32615F. The other side of this same disk also is used in the score for "The Side of Paradise."

With the title, "To the white-winged pleasure craft—" we change to the opposite side of the first record used, another piece from Kiethey's "A Fairy Resins," entitled, "The Queen Fairy Dance" (British Columbia 34201).

Finally, with the title "My greatest treasure—" we close with yet another of Kiethey's compositions, this time the "Phantom Melody," played by Albert Sandler on British Columbia Record 8403.

The most intricate of these scores is that arranged for Dr. Roy E. Geisler's "Japan and Its People," which carried off the honors in the educational class. This film strikes a variety of tempos and moods, and accordingly requires a greater variety of musical themes and a greater number of records.

For the opening we play Ludwig Seidel's "Chinese Street Serenade," played by Dr. F. Weissenborn and the Grand Symphony Orchestra of Berlin on Odeon Record 3361. At the title "Hailing new sailors—" we change to Arrand's "The Rose-bud Goes A-swinging," recorded by Ferdy Kaufmann and His Orchestra on H.M.V. B3597.

At the title "Harvest time in rural Japan," we change to part 2 of the "African Motives" from Heino Bards' "Egyptian Suite," played by Eugene Bels and His Orchestra on Odeon 3256. At the close-up of a Japanese peasant-woman in the field, with a load on her back, we change again, this time to Yoshitaka's "Japanese Lantern Dance," on the other side of the first record.

At the close shot of a lady taking a bath in a basket we change to "Impressionism on a Japanese Tune," composed and played by Edwin Zerkow on Columbia Record B310-D.

When the title introduces the sequence on silk culture we change to a theme more appropriate to the busy hands shown. Bercelanti's "Gnashoppers' Dance," played by the Royal Virtuosi on British Columbia Record DB-3307.

At the title "Washing and drying silk" we return to the "Japanese Lantern Dance." At the title "Clothesman at his task" we change to Williams' "Almond Blossom," recorded by Del Damber and His Orchestra on H.M.V. B-3916.

Since this is but a ten-inch disk we repeat it, starting from the beginning at the title introducing the "Flower arrangement school" sequence.

As a title introduces the sequence devoted to the celebration of ten thousand candles we change to the first movement of F. Papp's "Suite Oriental"—"The Serenaders," recorded by Dr. Weis-

mann and the Grand Symphony Orchestra on Odeon 3382.

At the title which indicates that this ceremony consists of chanting, striking gongs and ringing bells we change to music which, while Bercelanti instead of Japanese, is surprisingly appropriate.

This is a record from a special series of authentic Oriental recordings prepared under the direction of Professor E. M. von Hornbostel, entitled "Music of the Orient." This particular disk is labelled Bah (baeta) Gendee-Wajang "Solentem," and is Odeon's O-44026.

The close of the picture takes us out of the temple, as we change at the title saying that the shows are left outside to "Almond Blossom" as an appropriate close.

These scores, as has been said, were prepared for the showings of the prize films at meetings of the Los Angeles Cinema Club, the Los Angeles Sym. Club, and other Los Angeles groups, and the records were selected from the writer's personal library.

Readers can obtain most of these records in this country, despite the fact that many of them—the British Colum-

bias, H.M.V. and some of the Odeon—are foreign issues.

Some have since been released domestically by American affiliates of these firms. The H.M.V. records can be obtained through the RCA-Victor organization, the British Columbia through the (American) Columbia company, though these firms import largely on special order.

It is, however, highly probable a surprising number of these foreign disks might be immediately available from the Gramophone Shop in New York City, the foremost record-importing concern in this country, and one of the few where extensive stocks of foreign recordings are always on hand.

For the benefit of those interested in scoring their own films, a special catalogue of recorded "Good Music," compiled by the Central Record Information Bureau, "His Master's Voice," 361 Oxford Street, London, W1, should be most valuable.

This booklet lists 1250 records according to mood and, we understand, does not confine itself to H.M.V. records but includes records of several other firms as well. The price is sixpence (about 12 cents) or eightpence (16 cents) postpaid.

Authority on "What It Takes" Writes Views on Moviemaking

In a personal letter to the editor *Duncan MacD. Little*, is amplifying a point under discussion, sketched his own occupation of the essentials entering into the making of an amateur picture. As not infrequently happens one who writes casually, freely and frankly and with no thought of *any* gain seeing what he has poured forth in better advantage. It becomes rather the place of the teacher, instead of a unwitting, that teacher with writing for publication. In this letter the writer has condensed into three hundred words more of value to the beginner and also in the way of a reminder to the professional than may be found in some drama textbooks a lesson from its length we asked Mr. Little's permission to reprint. The excerpt follows.

By DUNCAN MACD. LITTLE

FOR my own part, a movie should first have as a basis some idea to be conveyed to the audience, be it fact or fancy. Then there enters in the point of view of the teller of the idea—the director (or with most amateur efforts) the cameraman.

After these we are entitled to reasonably good camera work—the better, the better—but I feel that flawless and technically perfect camera work is lost and wasted without a story well told.

The story need not be a fairy tale, nor a world startling drama, but it must have a theme. It must start from some one point and progress to some other point where comes a logical ending, and then it should end.

The story may be what takes place in a given factory, or in one hour of a man's life, or in a certain community—or even it may be what might or could happen.

Or it may be a dream—anything—but it must be something.

And it must be told logically and in sequence, with some definite stopping point where it must end.

The great problem is there: what to film.

The next question is solved differently by each of us, and therein is a point of interest—the totally varied approaches that are found in a given group of persons all with more or less the same background.

For the third, most creators who have solved the problems can do so reasonably capable camera work. Occasionally comes one who is outstanding.

Personally, I prefer novelty of theme and ingenuity of handling to perfection of technique. But that is not to be taken as an excuse for sloppy or careless camerawork. By no means.

department was that during the making of the picture *Operative Cameraman* Bob Sartore had taken pictures of the larking in Kodachrome stills, the results of which verified the department's conception of what the photographed results should be.

Something unique in the creation of the sets was the attention paid to hand decorating, this being particularly notable because of the size of the staging in the creation of the approximately 18,000 square feet of scenic backing nearly two weeks were required for the completion. The actual painting was accomplished in eleven days.

The many square feet of grass that which cover the open sets are made all the more authentic, the more lifelike, by sprinkling them with the cuttings from genuine lawns. These are replaced as is necessary.

The cameraman has been responsible for the photography of the three major subjects in which Deanna Durbin has been featured—"Three Smart Girls," "100 Men and a Girl" and the present one. Like other adults who have worked with this girl so unusually equipped he is a Durbin partisan.

Joe Pasternak, producer of "Mad About Music," also has served in the same capacity on the series of Durbin features. Norman Taurog is directing the production.

Eight Hours for Deanna

What may not be generally known is that the young singer is not permitted to be on the studio lot more than eight hours a day. That is on account of her nervousness. Her time does not begin when she steps on the stage, all runs up. Rather it starts as she enters the studio, before the makeup artist and the hairdresser have consumed their allotted



Demonstrating the ability and craftsmanship that entered into the preparations for the making of "Musical," "Mad About Music" is the photograph traced from An inside set shot by Art Director Jack Otterson. Note the attention to the lighting of this set—just as if it was peeped with pleasure, the exposure of the shadow on the wall at the left of the entrance. The set may be identified as the place on the opposite page as the entrance in the southeast corner directly under "Wood."

hair and a half to prepare the player to face the camera.

On the Universal lot is a miniature but most attractive art display showing in water colors the realized conceptions of the artists as inspired by the sketch artists after reading the cold-blooded script of the writers. The display, composed of some two score subjects and

adorned the office of Chief Otterson, visualized the various structures constituting the staging of "Mad About Music."

When the picture is completed all of these buildings, specially created, will be reutilized on the back lot, there to serve at some time in the future for "such matter as then may be born to it."

'Hints and Gadgets' Contains Tips to Working Camerists

THE American Photographic Publishing Company, 428 Newbury street, Boston 17, has issued "Photographic Hints and Gadgets," edited by Frank R. Frayne and Franklin L. Jordan. The price is \$3.50. There are 250 articles with nearly 500 illustrations. The book has 316 pages and is nicely printed, with a quality of paper that makes the publication weigh in excess of two pounds. The type is a lean 8 point on 8 that packs many words in a space.

The book is of a character that will deliver the normal bedtime of many a camerist. As the preface of the publication sets forth, "no one person could ever think up half the things it contains. It came out of the sweat and toil and practical experience of hundreds of enthusiastic photographers whose humble

wits have devised these clever mechanical means for overcoming some of the many difficulties that stand between them and the attainment of their goal."

The editors say—and the statement seems justified by the variety and quality of the gadgets described—that at their invitation for suggestions they were swamped with an avalanche of manuscripts from all over the English speaking world. They add the book contains many items not regularly marketed.

In the Hired Contents are seven subjects, in Cases and Outfits four, Miscellaneous Cameras three, Aerial Cameras three, Adapters nine, Tripods thirteen, Lens Shades seven, Optics six, Exposure three, Focusing four, Synchronizers five, Light Controls eight, Lights eight, Darkrooms five, Darkrooms Helps twenty six,

Film Development ten, Temperature Control four, Timers six, Chemistry three, Washers nine, Drying ten, Negatives eight, Retouching four, Printers five, Printing five, Enlargers seven, Kase's nine, Enlarging five. Following comes three articles, Training three, Mounting three, Color three, Copying five, Micro one, Table Top three, Nature seven, and under Miscellaneous there are twenty-nine articles.

The foregoing gives a comprehensive idea of the variety and appeal of the subjects contained in the pages of this unusual book.

James E. McGhee has been appointed general sales manager of the Eastman Kodak Company, filling a position vacant three years.

The new sales manager joined the Kodak Company in 1929 and served for six and a half years as a demonstrator in the medical division, maintaining contact with users of x-ray film. He was transferred in 1937 to the company's Chicago branch as assistant branch manager. He entered the sales department at the Kodak Office, Rochester, in 1934.

Polito Matches Daylight

(Continued from Page 31)

You use air lighting instead of incandescents—"hard light" instead of "soft"—but your actual lighting balance need not change appreciably.

You do have a definite advantage in the equipment you use, however, for the set lighting units used on modern Technicolor pictures were developed by Mile-Richardson especially for use with the new three color version of the Technicolor process. As a result, these H. I. Area, Ultra H. I. Area and Side Area are considerably more efficient than most of the lamps supported for regular black-and-white cinematograph.

A Lighting Trick

I have noticed that in most studios, the cinematographers use the Solarspot incandescent spotlights whenever smooth, precisely controllable beams are imperative; and these "H. I. Area" spotlights are also units of the same general design. Picture what you can do in simplifying lighting when all of your spot-lighting units are of such a modern, efficient type?

Incidentally, I learned a little trick of lighting faces which I have turned over to my black-and-white camerawork with good effect. In the close shots in my Technicolor pictures, I found it extremely handy to use the little Baby Solarspots fitted with Photofoil globes and, of course, the special daylight blue filters that correct their light to co-ordinate with the area. In the black-and-white production I am now filming I have found the combination of small Solarspots and Photofoil globes invaluable in lighting faces.

Real Advantage

There is one peculiar common to all color processes. Some colors can be most objectionably obtrusive at times. In black-and-white, for instance, you can work on a set with red red walls, scene in the knowledge that that shade of red will come out a dark gray on the screen.

But in color those obtrusive red walls very easily may be exaggerated into something that can steal the scene from a whole troupe of Academy Award actors.

But—in color, you have one very beautiful advantage. If you don't want any color to show on the screen all you have to do is keep the light away from it! Simply don't illuminate that area, and your objectionable color is literally eliminated from the picture.

When you consider the technical conditions of lighting a modern color set, where you have almost no worries about "spilled light" you can see how easy this technique is.

Camera May Subdue

Here, by the way, is where the cinematographer faced with the problems created by one of these art directors who tried to tell the story with exaggerated "color moods" has a tremendous advantage. Of course, the coloring of sets

and costumes designed for color pictures should by all means be soft and unobtrusive; but if they are not, the cinematographer has in his lighting a very potent means of making them conform to good taste.

In lighting Technicolor scenes there has been, I think, too much fear of shadow. Of course, a really strong placed shadow can be a potent liability; but in many instances ordinary shadows which, in a monochrome scene would be bad, can, in a Technicolor scene, be quite natural or even, in some cases, a positive advantage.

For instance, suppose we are shooting an exterior scene of a man, in the sun light, wearing a large hat. In real life, we would see a heavy shadow over his eyes, cast by the brim of his hat.

In black-and-white it has become traditional to lighten or even eliminate that shadow with reflectors or booster lights. In monochrome this technique may be desirable, but in color I have found it often makes the scene more real if you let that shadow remain, exactly as the eye sees it.

Useful in Color

In the same way, I have found it is often an excellent trick of Technicolor cinematists to have some prominent object—a figure, or a part of the set—either silhouetted or semi-silhouetted in the immediate foreground, while the main action of your scene takes place in a more brilliantly lighted middle distance which, in turn, might be con-

trasted against a darker (better, still, darker yet) background.

For years this has been a useful trick in black-and-white, and it is just as useful in color. Perhaps it is even more useful, for you have color contrasts as well as lighting contrasts to help give your scene depth.

In the same way I have found that very impressive color scenes can be made playing your action through broken shadows. One of the more effective scenes in "Gold Is Where You Find It" was one in which the farmers, led by Claude Rains, march to attack the mine.

In this scene the figures move under a canopy of trees, alternately passing through beams of sunlight and patches of shadow. In black-and-white such a shot would give you a more positive feeling of the scene's movement; in color, the silhouette is very strongly heightened.

Of course, either in monochrome or in color, such a scene might very probably require some use of reflectors or booster lights to keep the shadows from dropping off to absolute opacity. This brings us to another phase of color filming. In photographic color, by any process, the color of the lighting is important. In Technicolor, the whole process is keyed to the color standard of normal daylight.

This means that any type of reflected natural light or artificial light used to supplement daylight on exterior scenes must also conform to the daylight standard. If you use reflectors you must therefore use silver reflectors, rather than the gold ones we so generally use in monochrome pictures. And while no reflectors are easy on the actor's eyes the silver reflectors are particularly helpful in this respect.

Matching Daylight

It is therefore very fortunate the arc lighting units normally used for modern Technicolor photography are inherently corrected to match the daylight standard. The Mile-Richardson Side Area used for floodlighting are an almost perfect match for daylight.

The 36-K high intensity arc spotlights, from the basic 1000 foot-candle spotlight up to the big 150-watt Type 170 K 1 Arc, match daylight perfectly, if used with their regular straw-colored gelatin filters.

And they are much easier for the actors to face than my reflectors. So when it comes to exterior scenes in color the cinematographer has the pleasant advantage of knowing that while booster lighting will give him better control of his illumination than if he used reflectors he is in addition giving the members of his cast a break in providing them more comfortable working conditions.

This is particularly important with some of our stars, who have weakened their eyes by always wearing aviator glasses when they are outdoors.

The range of exterior lighting effects possible in color is really unimagi-

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ing. Of course, you have to pack the right conditions for such effect shots, just as you would in black-and-white. One of the most generally praised shots in "Gold Is Where You Find It" was a night effect shot of the "monsters" of the hydraulic miners working at night, illuminated by fires and torches. This scene was actually shot at dusk, which gave the bluish overall cast suggesting night, and still permitted the fires and torches to pick up on the film.

Good Cooperation

In closing, I would like to pay tribute to the cooperation given me by my fellow workers on "Gold Is Where You Find It." Director Michael Curtiz, as usual, went out of his way to help me in my efforts to obtain effective photography.

My own camera crew, and also the Technicolor technicians who worked with them, cooperated splendidly, and deserve much credit for the results achieved. The many members of the Technicolor organization, from the officials down to the humblest worker in the laboratory, also seemed to take special pains to help me feel at home with their process, and I am deeply grateful for their friendliness and cooperation.

Finally, I would like to pay tribute to Byron Haskin, A.S.C., and his special effects staff. Traditionally it has been held against color that you could not do much in the way of special effects camerawork in a color picture.

But in this picture Haskin and his colleagues have done—on Technicolor—just about every kind of trick camerawork you would expect to find in the picture had we filmed it in monochrome. Glass shots—some of the finest anyone has ever done in either monochrome or color, miniatures, large scale projected background process shots, and process shots where a miniature was used as a background.

Once a Photographer . . .

It is not my province to say how these were done, but I would like to go on record now as saying that Haskin and his associates have accomplished great things, not only in using existing equipment for this work and in devising special equipment for it, but in the results they have put on the screen. They are to be congratulated.

All of which brings us back to our original premise. There is really little to be said about using the modern Technicolor process and the lighting and other equipment that go with it.

If you can photograph a picture well in black-and-white you will find that there is surprisingly little to do in adapting yourself to color. An understanding of the basic limitations of any color process—an appreciation of how color contrasts as well as lighting conditions affect your composition—and a few little changes in lighting and exposure methods—and there you are!

Really, no cameraman need be worried about the coming of color.

"Pitz Palu" Makes Genuine Hit When Revived at Fourth Evening

THE fourth of the series of Eight Motion Picture Evenings sponsored by Mr. and Mrs. Duncan MacCl. Little and Thomas H. S. Andrews was held January 8 at the Little's home in New York.

The program began with George A. Ward's "The Last Review," a most interesting and worthy film made in 1934, which in that year won a "Ten Best" rating by the Amateur Cinema League as well as the Metropolitan Cup, annually awarded by the Metropolitan Motion Picture Club of New York.

The subject of this film is the shifting of a field artillery unit from "horse-drawn" to "motorized," and winds up with a regimental review. There is a dramatic twist to the picture which contributes to the strength of an excellent subject.

The second half of the program was "The White Bell of Pitz Palu," produced several years ago under the direction of G. W. Pabst with the author, Dr. Arnold Fraenk.

Even with the passing of the years and the so-called improvement of the cinema thus in a great picture. The spectators hope to screen it again, and are confident it will lose nothing in another ten years.

Several interesting adlights came out in conversation after the screening.

Several interesting adlights came

out in conversation after the screening. One of the group is a mountain climber and he knows every crack and crevice of Pitz Palu. It was the first "real mountain" that he scaled, and he suggested the "north wall" is quite as bad as it is shown to be in the film.

Another comment was that Ernst Udet, the "Aviator" of the story, today is one of the high ranking aviators of the Reich, while yet another interesting bit was that Lenz Riefenstahl is now an outstanding if not an internationally known photographer and a person well known in her own land.

Eastman Announces Steel Cut and Film Pack Tank

A new stainless steel developing tank for cut and pack film, incorporating a molded reel of novel design, is announced from Rochester by the Eastman Kodak Company.

The new tank (Kodak adjustable cut film pack tank) will accommodate all standard film sizes from 4.5 by 6 cut to 3½ by 4½ inches. This flexibility of use is obtained through use of two covers on which the molded reel design slide. Nibbled markings on the covers enable the user to adjust the reel quickly to any one of twelve film sizes.

The tank accommodates twelve films up to 2½ by 3½ and six films of 3½ by 4½ or 3½ by 4½. Over the loaded reel is placed in the steel tank, and the molded cover slipped on, developing, fixing and washing may be completed in daylight. The tank reel is designed to permit full circulation of solutions, and films are held in curved position to prevent buckling and contact with each other.

Third Rolleiworld Salon Is Set for May 2 in New York

The Third Rollei-Show is scheduled to open May 2 at Rockefeller Center, New York. Exhibitors from all parts of the nation are expected to participate. All entries must be in by April 16th. The salon is being held primarily to stimulate interest in advanced photography among users of the Rolleiworld, Rollei-flex, Rollei-oscope and Rollei-oscope cameras, made by Franke & Heidecke and distributed in the United States by Burleigh Brooks, Inc.

Entries should be sent to Burleigh Brooks, Inc., 127 West Forty-second street, New York. There is no entry charge. A total of \$450 in thirty-one cash prizes will be awarded.

German Cinema Capacity

Latest statistics show that there were in Germany at the close of 1937 a total of 5395 cinemas with seating capacity of 1,992,854. The aggregate attendance for the year is estimated at 403,000,000.

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Notes of the Movie Clubs

Los Angeles 8mm Club

THE January meeting was held at the Main Street School Auditorium, 2611 West 25th Street, with 280 persons, the largest attendance in the history of our club. The meeting was called to order by President C. G. Cornell. The following committees were named:

News Items, William Horton, chairman; R. E. Cunningham.

Social, A. Vincent Blagov, chairman; Lutz C. Sprague, A. J. Zeman, Derm Lee.

Still Photographers, Joseph B. Ridge, chairman; Henry Huddleston, P. M. Nimsbach.

Techical, C. W. A. Cadavette, chairman; Radoslaw E. Chudy, Dr. P. R. Loscher.

Thru The Filter, Jane Gay, editor; Radoslaw E. Chudy, assistant editor; Jack Taglia, assistant crank timer; Milton R. Armstrong, article writer; P. M. Nimsbach, technical reporter; Dr. John M. Guille, reporter, Sergeant Robert W. Tenney, foreign correspondent.

Ladies, Charlotte Armstrong, chairman; Lutz Hingman.

William Stul, with his own musical scoring, presented seven scenes of the Cinematographers International contest. It seemed to be the general opinion the 1934 group as a whole exceeded in quality any previous prize winners.

The meeting adjourned at 10:50 p.m. at the end of a most delightfully educational evening.

Hon. B. Vogel, secretary

Philadelphia Cinema

The meeting Tuesday, January 15, was given over to the Eastman Kodak Company for a demonstration of the new Eastman Sound Kinescope Special and other Eastman products. A film dealing with photography by polarized light was shown and in addition two films sent from the Eastman Laboratories especially for the meeting.

Mr. Metzler, one of the members, answered questions on polarized light, and Mr. Hunter demonstrated and answered questions regarding the sound projector. Both men are associated with the local Eastman Stores.

The members of the Philadelphia Cinema Club had been invited to attend a lecture at the Engineers' Club on Monday evening, January 16. Dr. Forster Tuttle of the Eastman Laboratories talked on "High Speed Photography." The program was under the auspices of the American Institute of Electrical Engineers.

Applications for membership in the Club now on hand will bring our membership to its full limit.

A. L. G. Ranch, Secretary-Treasurer

Cinema Club of San Francisco

The first regular meeting of the year was held Tuesday, January 23, at the California Camera Clubroom, 45 Polk street.

A particularly timely subject was presented, that of "Proper Lighting for

Indoor Pictures." The talk was given by O. J. Smith of the Eastman Kodak Company.

L. T. Barnes of Atlas Educational Film, demonstrated the Ansco line of sound projectors as well as the company's latest model of silent projector.

The Pacific Film Company, which has a free and rental film exchange, showed two 485-foot reels of winter sports.

E. G. FETTERICK, President.

Metropolitan MP Club

At the regular monthly meeting of the Metropolitan Motion Picture Club, held January 13, in Radio City, New York, the films winning highest honors in the annual club contest were announced. "Little Sherlock," by MNPC President Charles J. Carberry, was pronounced best film of the contest.

Best film in the topical and miscellaneous group was "Mother Earth," by Charles A. Ferris, Jr., an item film. The best film in the travel and scenic group was "Automobile in Yugoslavia" by Dr. Konstantin J. Kostich, a native of this country. The landscape film of bicycling, "Under Your Own Power," by Sidney Harris, was judged third best.

In Class C-3, Metropolitan's bulletin, we learn that at the December meeting Charles Gode presented a very interesting lecture on the not too technical aspects of the Hayden-Grace Ferns Eclipse Expedition through the use of hand-colored slides accompanied by spicy comment.

This was followed by the presentation of "Eclipse Over Peru," two reels of kachrome depicting both the trip and the actual filming of the eclipse. The atmospheric background music used with this film was particularly well chosen.

A device to end all devices might well describe the titles demonstrated by William P. Brundage. Designed and built by Mr. Brundage, this title will, he claims to do, everything but fly. The roll of film which he projected certainly seemed to justify his claim that he can reproduce any effect now used on the professional screen. Few mechanics are able to pull as many tricks from such an innocent looking piece of apparatus as Mr. Brundage showed with his remarkable titles. The only thing Mr. Brundage failed to tell was how, after taking the time to build such a gadget as this, one can still find time to make movies!

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Model Theatre in Home

(Continued from Page 77)

not be a bit crowded. But this is no remodeled coat-closet. It is a room specially designed to house its cinematic equipment. The booth is eight feet square, and has ample elbow-room.

Actually, in addition to this sound and picture projection paraphernalia, there is a cutting bench, a cabinet for storing several score phonograph records, and a total of 28 feet of shelving for storing film. Ventilation? That is provided by a special forced draught cold air intake from outside the house.

Quite incidentally—though of vast practical importance when presenting continuous shows with two projectors—is the fact that the booth is fitted with an automatic changeover device. As one projector comes to the end of its reel the other is threaded up and started running, with its light dark.

Quick Switch

At the desired split-second, the operator flips a switch and— presto!—the master lamp and projection lamp of the receiving projector are turned on, those on the other turned off, and the amplifier switched over to the second machine's sound pick-up.

All of which might go to prove that the hand—backed up by such theatre-type, automatic equipment—is still quicker than the eye—or ear.

After having showed us the installation, and letting us take pictures to our heart's content, our anonymous host pleaded purity to the charge of having

built his home around the projection room. The whole thing forms an integral part of the building. The positions of the screen, speakers, projectors, and so on were determined first, and the rooms was then arranged around them.

In building the living room the architect called into consultation a noted acoustical engineer, who in turn prescribed special, soft acoustic plaster for the walls, so that there is no trace of reverberation or other sonic aberrations which might disturb the sound.

The conduits for power supply and for the wires that carry the sound from amplifier to loudspeakers were built permanently into the structure of the building. In a word, our friend went about things exactly as though he were building a theatre.

All told, here is a home projection room which embodies every possible element of perfection for de luxe home screenings of 16mm. or 8mm. film, with or without sound. Of course, not all of us are able to follow this filer's example and build a home around a perfect projection room, but most of us certainly dream of someday doing so.

And how reassuring it is to know that such an installation is actually practical, and that someone, at least, has been able to bring the sub-standard home theatre into the world of concrete practicality!



Close-up of amplifier and monitoring speaker. Switch in center of panel directly above dial is changeover control. At top of picture will be noted two of the optical glass parts through which focus pictures are projected.

J. P. J. CHAPMAN
THE HUON

BRANKSOME HILL ROAD
BOURNEMOUTH
(England)

13th January 1938

American Cinematographer,
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